

THE MEDICAL AND SURGICAL REPORTER.

No. 2013.

SATURDAY, OCTOBER 5, 1895.

VOL. LXXIII—No. 14

ORIGINAL ARTICLES.

PERFORATION IN ENTERIC FEVER; ITS SURGICAL TREATMENT.*

FREDERICK HOLME WIGGIN, M.D.,† NEW YORK.

There is no complication of enteric fever more dreaded by the physician than perforation. It occurs in about two per cent. of all cases. Its most frequent causes are improper diet, distension of the bowel from any cause, or too early and sudden movements of the patient. It is present as often in mild cases as in those which are severe and is most frequently met with in young adult males. As is well known, its recognition is not difficult. Its occurrence is announced by the advent in the course of the fever of sudden severe pain in the right iliac region accompanied by symptoms of collapse, this being soon followed by the symptoms of peritonitis, and almost invariably on the second or third day the case terminates fatally. The site of the perforation is generally found to be in the last twelve inches of the ileum.

The late Prof. Loomis, in the course of the discussion on Dr. Reeve's paper on typhoid fever, read before the Association of American Physicians in 1890, said: "I do not remember to have seen

a single recovery after there were unmistakable evidences of intestinal perforation. Recovery from a localized peritonitis complicating typhoid fever is not uncommon, but when characteristic symptoms of intestinal perforation are present, in my experience a fatal issue soon follows." With such evidence and our own individual experience of the hopelessness of the patient's condition when reliance is placed on Nature's efforts at repair, (spontaneous recovery resulting less frequently in this than in other forms of perforation, on account of the central location of the injury), it is not to be wondered at that with the constant reports of successful operations for the relief of perforation from other causes and in other locations, the physician should turn toward the surgeon, asking if among the good tidings modern surgery is proclaiming to many sufferers there is not some message of hope for the unfortunates whose condition we are considering, who seem at present to be condemned to an untimely death, and by whose bedsides he has so often stood with folded hands, helpless to aid them. Said Dr. Bontecou, of Troy, New York,

*Read at the meeting of the Connecticut Medical Society, at Hartford, May 23, 1895.

†Visiting Surgeon, New York City Hospital (B. I.), etc.

the first in this country to operate for this form of perforation, in the course of the discussion on Dr. J. Ewing Mears' paper, read before the American Surgical Association in 1888: "I claim that when this mortal accident occurs laparotomy cannot impair, but may improve the patient's chance of recovery." Said Dr. Van Hook, in his admirable paper reporting the first successful case of operation for perforation occurring in the course of a closely diagnosticated case of enteric fever: "It is strange, nevertheless, that a question involving the only promise of help for five and seven-tenths per cent. of all those dying of typhoid fever should not have excited even more interest and discussion." Dr. Robert Abbe, in a recent report of a case, also successfully operated upon, (*Medical Record*, January 5, 1895,) said: "Why one class of cases should be left to die, while we operate on all appendicitis cases, when perforation can be recognized, does not appear." Again, said Prof. Kussmaul, some time since: "Granted that the chance of a successful issue is heavily against you, that the patient is in the midst or at an end of a long sickness, that his tissues are in the worst state to stand the injuries of the surgeon's knife, that the lesions of the gut may be extensive, that the vital forces are at the lowest ebb, no one yet has hesitated to perform tracheotomy in the laryngeal complications of enteric fever which require it to save life, for these reasons."

With this testimony and much more that could be offered in favor of operation, one cannot help being surprised in looking over the literature of this subject, to find on record only twenty-four cases, of which six recovered. If those cases are rejected in which there is doubt of the diagnosis, we find only seventeen cases where an attempt has been made to relieve the patient's desperate strait by surgical means. Of these three recovered. Allusion has already been made to the first and third, and the second recovery belongs to Dr. Netschajau, of St. Petersburg, (*Medical News*, Dec. 1, 1894). The writer's opinion, formed after a careful study of the subject and from a considerable experience in abdominal operations when the patients were septic and consequently in

bad condition, is that the physician on taking charge of a case of enteric fever should prepare himself to act with promptness on the occurrence of perforation. It is well to remember that while there should be the least delay possible, these patients rarely die in the first state of collapse and that this condition is not one favorable for operation. The patient, as soon as the diagnosis is made, should be stimulated by means of strychnia and morphia. If the patient rallies then the operation should be performed without loss of time and under favorable conditions there is a fair chance of success, especially in those cases in which the course of the fever has been mild or where the perforation has occurred during convalescence. Of course, if the patient refused to respond to the stimulation the operation would be useless. Dr. Abbe, in the paper previously alluded to, said: "Very essential do I consider it that the surgeon should never be so hasty in getting at his work that he enters upon it handicapped by poor assistance, poor light or poor arrangements for irrigation." While the patient is being stimulated the necessary arrangements for the operation can be made. The writer's experience has shown him that a laparotomy, although the personal care and trouble is greater, can be even more safely performed in a farm-house with good surroundings than in a city hospital. All that is requisite is a clean light room, without carpet or furniture, except two or three wooden tables, an abundant supply of hot and cold soft spring water which has been sterilized by boiling, and a dozen towels.

Patients of this class do not bear anesthesia well and in fact the great danger comes from this source. With a closed inhaler of the Clover type, or Dawbarn's modification, which the writer has used with satisfaction for some years, patients can be readily anesthetized and kept unconscious for an hour with four ounces of ether. The incision should usually be in the median line between the umbilicus and the pubes, rather than over the site of the pain, true as this guide generally is to the point of perforation, for from this point one has the abdominal and pelvic contents under command. Search should first be made

in the pelvis because collapsed small gut and extravasated matter tend to fall into this cavity, as has been pointed out by Bland Sutton, (*Clinical Society Reports*, London, March 9, 1894). If the inflamed and perforated intestine is not found here the cecum should be sought, and the last foot of ileum is then easily located and looked over. When the injured point is found, the perforation should be closed if possible by Lembert's or Halsted's mattress sutures and should then be covered by an omental graft. The sutures for closing the abdominal wound should now be placed, all the layers of this wall being included. These sutures should be of silk worm gut. When this has been accomplished the abdominal cavity should be freely irrigated with a hot saline solution (half a dram to the pint), about two gallons being used, the temperature of the water being from one hundred and ten to one hundred and fifteen degrees Fahrenheit, according to the degree of shock the patient is suffering from, and in most cases the abdominal cavity should be left filled with the irrigating fluid, and the sutures already passed should be drawn and tied. If effort has been made by nature to shut off the perforated point by adhesions before they are disturbed, the general cavity should be shut off by sponges or gauze. In some cases all that would be advisable to do would be to draw the perforated intestine into the wound, and after free irrigation of the abdominal cavity it should be stitched to the wound or surrounded by gauze, further procedure being delayed till a future occasion. In a still more desperate case, one occurring earlier, when the fever was at its height, or in which the fever had run a severer course, one might, with the aid of cocaine anesthesia, rapidly open the abdominal cavity over the site of greatest pain, and, after irrigating, surround the perforated intestine by gauze, thus shutting off the general cavity, favoring the formation of adhesions and securing drainage, as has been suggested by my friend, Dr. E. D. Ferguson, of Troy, New York. In one of the successful cases previously alluded to, Netschajaus, a portion of the perforated intestine was excised, and now that an anastomosis by means of the Murphy

button can be easily effected in five minutes, it may, in favorable cases, especially in those in which a number of ulcers are near together and in a dangerous condition, be quicker and wiser to excise the diseased intestine. The decision as to the best procedure must be determined by the circumstances of each case and by each operator for himself. It is here that skill and experience count for the most. Personally, I favor closing the abdominal wound after free irrigation, leaving the abdominal cavity full of the hot fluid, as I know from many past experiences how much this procedure does to lessen shock and to prevent the danger of septic infection of the peritoneum. If at this time shock were still great it would be wise to follow Dr. Abbe's advice to administer an enema of black coffee and whiskey on the operating table.

In conclusion, may we not all agree that in many cases of perforation occurring in the course of enteric fever, an attempt should be made to save the patient by operation. The patient should be freely stimulated on the occurrence of this accident, and careful preparation ought at once to be made for the operation. Time should not be purchased at the expense of experience, light, or competent assistance. The smallest possible amount of ether should be used. The surgical procedure should be the least that offers hope of recovery to the patient. We must remember that the chance of a successful termination of our work increases with every dram of ether and every minute saved. Finally, the physician must realize more fully that the surgeon is his assistant and not his rival, and must give him, as well as the patient, a fighting chance by calling him early and not after several days of hesitation, which has too often been the case in this and other forms of intra-abdominal disease.

Under favorable conditions I am convinced that modern surgery has a remedy to offer these patients, and that in the near future the mortality from perforation occurring in the course of enteric fever will be markedly lessened. The medical text-book of the future will not state, as does Loomis, "When perforation of the intestine occurs, the case may be considered hopeless."

AUTO-INTOXICATION.

G. B. SWEENEY, M.D., PITTSBURG, PA.

Auto-infection, intoxication, and other terms, are applied to those conditions when the human organism, to a greater or less degree, becomes poisoned by products which have been elaborated within the economy.

That such infection does take place, under certain circumstances, has been admitted by physicians from time immemorial; at the same time, the exceeding scarcity of literature bearing upon this subject suggests only too strongly how little of definite knowledge has been gained. What information has been gained has been obtained under circumstances which render it very difficult to demonstrate beyond a doubt many phenomena which we believe are due to auto-infection, and which we are daily combating successfully by administering remedies which clinical experience proves are antagonistic to the morbid elements at work in the system.

The chemical changes which are constantly taking place within the body in both physiological and pathological conditions, and which cannot be satisfactorily studied in detail outside the organism, compel us to admit that, after all, nature works largely behind closed doors, and must form at least a part of our apology for failing to satisfactorily answer some questions which naturally would suggest themselves in considering the subject, and which, in the light of rapid advancement in other lines would seem to demand solution.

Our work in this field of investigation must be done largely in an inductive manner. Taking phenomena we must discover and identify causes. Incidentally, permit me to say that the crowning glory of the nineteenth century, from a medical standpoint, is the disposition to study the origin of disease. A new and beneficent era of progress in the science of medicine must be ushered in through the untiring and zealous efforts of an army of earnest workers who are identifying processes, physiological and pathological, and dis-

covering the places where they diverge, and pointing out the causes of disease.

Going immediately to the question of the causes of disease we recognize four primary pathogenic processes. The first of these, elementary dystrophies, while arising from vital activity of cells when acted upon by some external causes, physical, mechanical or chemical, is especially difficult to study, as the simple process is usually complicated by effects of a local character.

The second of these causes, nerve reaction, is also difficult to assign to its proper place in the production of disease. We may well pause and consider whether we have accorded to the reflexes more or less pathogenic influences than they actually exert. Certain it is that they usually play a secondary role in the subjects previously reduced by other influences.

The two other pathogenic processes are disturbances interfering with nutrition, and infection.

Bearing directly upon the first of these is the question of diathesis, which has been aptly defined as a permanent disturbance of nutrition, which prepares, provokes, and maintains different diseases as seen in their location, their evolution and pathological processes.

Infection is the last of the four pathological processes. Traces of this nature are found far back in the history of medicine, but it has remained for these latter days, after witnessing discoveries brilliant and dazzling, although not always absolutely accurate, to demonstrate that in the body of an individual attacked by a contagious disease there exist lower vegetable organisms capable of implanting themselves and multiplying in the tissues of a healthy man, and of causing in him a disease similar to the original.

To speak of the specific microbe instead of virus, or of contagion, is not to supplant one idea by another; it is to advance from the vague and indefinite to the definite and rational.

This inquiry naturally presents itself to our minds: What makes possible the development of disease? It is not the chance meeting of man and microbe. This meeting is constant, generally unattended by results. Infectious disease is only an accident because the infectious agent finds only exceptional circumstances favorable, not to its penetration, but to its development and multiplication. In health man is not attractive to the microbe, but when his vitality is weakened then his means of defense is diminished.

The chemical constitution is modified by disordered nutrition and invites the invasion of the microbe. Persons fatigued by overwork, exposed to depressing influences, are struck by conditions real and disease developing from insignificant nerve excitations which would have produced nothing in perfectly healthy men.

The reaction of a disturbed nervous system induces temporary disturbances of nutrition. This in its turn opens the way to infection always at hand, to germs always present which certainly have to fulfil in nature another part but which, destined to destroy dead matter, are also capable of destroying living matter when they find it in a state of preparation. Here lies perhaps the history of angina, rheumatism, and pneumonia. When the physician shall be in possession of this double knowledge, that many diseases are produced by the microbes, and that these can act only by a deterioration of the health resulting from various pathogenic processes, he will recognize that the new discoveries contain nothing subversive, and that the lesson taught by ancient medical observations are not compromised. He will know that whilst seeking the means of combating microbes he ought, and he will always be obliged to sustain the forces of the organism and make good its defense, inspiring himself constantly with this truth: Before every illness there is a disturbance in life—for nutrition is life. Perverted nutrition leads up to the development of new substances which may become toxic.

We find in the organism peptones which do not originate in the intestinal tubes, but which are injurious in this sense, that, being dialysable they es-

cape by the urine, and thus bring about abnormal spoliation of the organism. Herein is intoxication.

But infectious agents can produce something injurious, can elaborate substances that are toxic. We find a great many bodies produced by the life of the microbe. They form soluble ferments which produce local lesions by breaking up living cells. It is certain that intoxication arises in part from the harmful action of microbes which, seeking a vulnerable point in the economy, proceed to a deleterious work.

As is well known, the kidneys and the alimentary tract are the highways in which these morbid processes usually have their origin.

To elaborate upon the different ways in which these processes manifest themselves is beyond the range of this paper, as I have only hoped to introduce this very important subject, which I am sure must be one of deep interest to this intelligent body.

Brow Presentation: Internal Manipulation

Schuhl of Nancy (*Archives de Toccol. et de Gynéc.*, May, 1895) reports a case which shows how in brow presentation its conversion into a vertex presentation by pressure of the finger or fingers is apt to be persistently reversed directly the finger is removed. In his case the patient had a capacious pelvis. The abnormal position of the head was rectified at the inlet, the membranes burst, but the brow came forward again. For half an hour the finger was kept against the head, but the latter did not become engaged in the pelvis. Schuhl therefore removed his hand. Five minutes later the head was found engaged in the pelvis, but the brow again presented. The mouth was open, the chin could not be reached. Within ten minutes the head was expelled, a live male child being expelled naturally. In this particular case, Schuhl observes the pelvis was capacious and the foetus's mouth was open. Polosson has already shown that this is, for mechanical reasons, an advantage in brow presentations. This case, however, shows that in general it is useless to try to "convert" a brow presentation when the head is still at the inlet.

CANCER OF THE STOMACH: GASTRO-DUODENOSTOMY WITH THE MURPHY BUTTON: GLIO-SARCOMA OF BRAIN.

R. W. STEWART. M.D., PITTSBURG, PA.

I here exhibit to the members of the Society a specimen of a cancer of the pyloric end of the stomach for which, on June 5, at the Mercy Hospital, I performed gastro-duodenostomy, using for the purpose a Murphy button. At the time of the operation the patient's weakened condition precluded a pylorotomy. After the operation the patient rallied well; in one week he was eating solid food, and on the thirteenth day passed the button. Soon afterward he was discharged from the hospital. On July 20 the patient died, and his family physician, Dr. Stein, removed the specimen, which shows almost complete occlusion of the pylorus at the point of anastomosis. The most important point, however, is the marked diminution in the calibre of the anastomotic opening as compared with the size of the original button. Even if we take into consideration the shrinkage attributable to the immersion of the specimen in alcohol, it must be still admitted that there has been considerable shrinkage of the opening, a fact which seriously militates against the usefulness of the button. It should be added, however, that in this case a prolonged operation would have been out of the question, and I am satisfied that the button anastomosis was, under the circumstances, the proper procedure to adopt.

GLIO-SARCOMA OF BRAIN.

This is a patient suffering from gliosarcoma, for which I have operated three times. On April 15 the patient had a convulsion. At irregular periods following this the convulsion was repeated. On June 4 he was admitted to the Mercy Hospital. At this time there was loss of speech, paralysis of the right side of the face; frontal headache was marked; convulsions daily, usually unaccompanied with loss of consciousness and limited to the paralyzed area. Dr. Robeson examined the eyes and reported that the eye-grounds were in normal condition. On June 17 an osteoplasty

of the skull was made, and a half ounce of sarcomatous material was removed from the brain over Broca's convolution. Recovery was prompt and the result, as far as the paralysis of speech and motor paralysis are concerned, was perfect, with the exception of a slight paresis of the lower part of the face. The convulsions, however, persisted, and on this account a second operation was performed on July 25, and about a drachm of diseased brain tissue removed, which was submitted to microscopical examination by Dr. Wasdin, who reported it a gliosarcoma. The patient's recovery from this operation was as good as on the first occasion. On August 10 he had, however, a severe convulsion in which he was unconscious, and it was followed by a delirious attack lasting over an hour. After this, headache became severe and constant; the pulse dropped to forty-five, indicating increased intra-cranial pressure. On August 14 I again operated, removing one ounce of the diseased brain tissue. At the present time, six days after the operation, there has been no return of the convulsions, but the right arm is paralyzed. A slight hernia cerebri has developed, which in this case seems a fortunate occurrence.

Actinomycosis of Internal Organs and Peritoneum.

Choux (*Arch. Gen. de Med.*, June, 1895) believes in surgical interference, although the rare cases of actinomycosis of the Fallopian tubes and ovaries seem very unsuited, according to the well-known original clinic reports, for operation. Though Netter and Cart advocate therapeutic treatment by iodide of potassium, so successful in animals, Choux thinks that in abdominal actinomycosis the salt may be given for a short time, but if its slow action is found to be outstripped by generalization of the parasitic disease, laparotomy is called for.

COMMUNICATIONS.

ALCOHOLISM.

A SYMPOSIUM OF RECENT MEDICAL OPINIONS.

STATUS QUO.*

That inebriety is a disease, and is curable, is fully recognized. The frontiers of truth concerning inebriety have widened, and each pioneer from his advanced studies, points to wider and more extended realms of facts that have not been examined. While the year that has passed has echoed the turbulent shouts of the gold cure empirics and their frantic rivalry and dying groans, a great, restless movement has been apparent all over the world on a far different level. The evils and obstacles to all civilization from inebriety, and the possibility of their prevention and cure, are convictions that are rapidly centralizing both in this country and Europe. Wild schemes of reform and wilder remedies, involving the most serious complications and antagonisms are proposed. Legislation, law, theology, and the boldest charlatanism are fighting to have their theories tried and accepted. The many questions of inebriety and alcoholism are coming into prominence in society meetings, into discussions of social problems, in the review and magazine, in the press and pulpit. Opinions are formed and defended with eagerness and boldness unknown before. The cure of a few hundred inebriates in asylums will be lost in the larger questions of prevention. This is the direction of scientific advance. How can we halt these armies of inebriates? How can we prevent and break up the recruiting stations? How can we isolate and lessen their destructive influence on society and on individuals? How can we prevent their culture and growth in our midst? We have, during all these long years, urged that the inebriate was diseased, and controlled by laws of dissolution that moved with uniformity, and could be traced and understood.

That all the confusion of theories and dogmas which are associated with these armies of inebriates, and the alcoholic problem practically will vanish in the light of scientific investigation. Every year the work raises in importance, and it is more and more evident that we are leading the advance and directing lines of research that promise a great revolution in the present study and treatment of this subject. Each year develops and solidifies the work of the past, and each year brings new assurances for the future. The past is full of cheering promises for the future.

STATISTICS OF INEBRIATES.†

I stated two years ago that there was approximately one million six hundred thousand persons who use spirits to excess in the United States. By excess I meant all persons who drank to intoxication continuously or at long intervals. This would include many persons who are temperate most of the time, then have drink paroxysms. It would also include persons who use strong spirits daily, seldom manifesting the usual symptoms of intoxication, but at all times more or less under the influence of spirits. These figures were reached from a study of the statistics of persons arrested for intoxication in the lower courts, also the general opinion of persons with a wide acquaintance among business men, who assert that less than two per cent. of all drinking men come under legal notice. The comparative statistics of a town of five thousand people in Massachusetts, Kentucky, and Texas might differ widely in the number of spirit-drinkers, and yet the same general facts would prove true in all of them. In some communities a very large per cent. of all the males are spirit-drinkers, and many females use

* Editorial, *Quar. Jour. Inebriety*, Vol. xvii, No. 1.† *Ibidem*.

spirits as a medicine most of the time. Of course, wide differences of opinion will prevail until some accurate statistics are made. Two attempts to make a census of drinking men in Eastern towns revealed many difficulties, and the intensely morbid desire to conceal the drinking customs of people. Both of these censuses indicated one drinking man to every eight persons, and a strong conviction that this was a very low proportion. There are many reasons for believing that the estimate of a million six hundred thousand persons who use spirits to excess in this country is a minimum rather than a maximum statement. If the persons who so frantically deny this statement will make a little study in their own neighborhood, they will probably find facts that will materially change their views of the extent of spirit-drinking in this country.

INEBRIETY AMONG RAILROAD MEN.†

The drink problem on American railroads is a question of business and without any sentiment. If the man who uses spirits in moderation or excess shows any incompetency he is discharged at once. An engine was sent to the shop for repairs more frequently than usual; an inquiry showed that the engineer was a beer-drinker. The inference was that beer had disturbed his judgment and made him more reckless, and he was discharged. Practical men are afraid to use spirits on the road for fear they will neglect some duty, and not act wisely in an emergency. Recently, a great railroad corporation gathered all the facts concerning the men, and the conditions of every accident which had occurred on their lines for five years. When tabulated it appeared that forty per cent. of all accidents were due altogether, or in part, to the failures of men who were drinking. That in eighteen per cent. there was strong suspicion of similar causes, yet no clear proof. In one year over a million dollar's worth of property was destroyed by the failures of beer-drinking engineers and switchmen. The companies' rules requiring temperate men for all positions are more rigorously enforced. Engineers find that practically

they are unable to do good work while using spirits, even in small doses. The coolness and presence of mind so essential in their work is broken up by alcohol in any form.

Trainmen, men exposed to the weather, reach the same conclusion, if they are practical men. The startling mortality of brakemen is referable in many cases to the use of alcohol to drive out the cold, or keep awake in long hours of service. Each year the duties and responsibilities of railroad men increase, and men more temperate, accurate, prompt, and careful in their work are required. Only absolutely temperate men can do this work for any length of time; all others fail and are dangerous in their weakness.

A western road permitted an inebriate, who was really an able man, to continue as a claim agent adjusting accounts against the company. His drinking was supposed to be an aid in the settlement of claims with other drinking men. After his death a temperate man who filled his place saved several thousand dollars a year by doing the same work, repeating the common experience that inebriates are always more or less incompetent. The great railroad strike of last year began among inebriates, and was sustained by drinking men and saloon loungers everywhere. While the large, well-managed companies are steadily driving out all moderate or excessive users of spirits, as business wisdom, and a measure of safety and security to the road, many of them make the mistake of permitting open saloons in their buildings at stations. The poor workmen are thus exposed at a time when they are least able to resist. It is inconsistent to rigorously forbid all use of spirits to the employés, and provide it for the traveling public. Notwithstanding the fact that nearly two-thirds of all trouble and accidents to passengers are confined to inebriates and persons intoxicated, several roads have recognized and avoided this mistake. It may be said with pleasure that inebriety among railroad men is rapidly decreasing, especially among men in active service. The time is approaching when railroad men will be composed of the most superior mechanics and workmen of the world. Of the railroad men who

† *Ibidem.*

are inebriates and discharged, they are probably the most incurable. The strains and drains essential and a part of the work, especially of trainmen, are followed by a form of exhaustion and central nerve degeneration from which recovery is difficult. Railroads are rapidly teaching the true solution of the great drink-problem, viz.: That alcohol is an anesthetic and paralyzant, and that inebriety is a disease, and the victim unfit and incompetent to act and reason soundly. They are also teaching the incompetency of men who use spirits to do any form of work requiring care and exactness. When this is accepted as a fact, inebriety will be judged in its true light, and the inebriate thrown out as unfit and unable to do the world's work.

FACTS RELATING TO ALCOHOL AND OTHER
ANESTHETICS.*

1. The three well-known anesthetics in common use—ether, chloroform and alcohol, each and all, when received into the blood, either by inhalation, hypodermic injection or by the stomach, first suspend the sensibility of the cerebral hemispheres (unconsciousness or anesthesia), and next they suspend in succession or simultaneously the functions of the respiratory, vasomotor and cardiac nerve centers or ganglia, thereby suspending life. It is hardly necessary to adduce proof of this proposition, as it is familiar to every practitioner of medicine and surgery.

2. Each of these three anesthetics act on the nervous centers in the same direction, and consequently each intensifies the action of the others, whether given together by inhalation as in the A. C. E. mixture, or separately by different methods, provided they are present in the blood at the same time. The correctness of this proposition is demonstrated by the experiments of Dubois in 1883, and still more fully by those of H. C. Wood as detailed in his "Address on Anesthesia" to the Tenth International Medical Congress, Berlin, 1890, and by many carefully observed clinical facts.

3. The action of these three anesthetics—alcohol, chloroform and ether, on the cerebral, respiratory, vasomotor

and cardiac nerve centers, is not only in the same direction, but that direction is one of *diminished sensibility* or paralyzant in direct proportion to the quantity used. This has been so perfectly demonstrated by the well-known experiments of Sidney Ringer and Sainsbury; Professors Martin and H. C. Wood; David Cernay, J. H. Kellogg, and others, particularly in regard to the action of alcohol, that it must be admitted as an established fact, or we must deny the value of all experimental therapeutics.

4. These anesthetics not only directly diminish nerve sensibility and force, but their presence in the blood so modifies the action of the hemoglobin, corpuscular elements and albumen, as to diminish the reception and internal distribution of oxygen and to lessen the activity of the cell nuclein and leucocytes; and consequently they lessen all metabolic and natural excretory processes. The correctness of this proposition is sustained by an amount of both experimental research and clinical observation sufficient to fill a fair-sized octavo volume. So far as relates to the action of alcohol, the reader will find these proofs alluded to more in detail in a paper prepared by me for the World's Temperance Congress in Chicago, 1893, and published in the second volume of "Temperance in all Nations," 58 Reade Street, New York, and also in an interesting volume "On the Effects of Alcohol," by Dr. J. E. Usher, London.

5. When alcohol, or either of the anesthetics named, is retained in the blood but a few hours, as is usually the case when administered for strictly anesthetic purposes, the effects mentioned in the four preceding propositions soon disappear. But when the dose is repeated sufficiently often to keep it pretty constantly present in the blood and tissues for weeks, or months, or even years, as when alcohol is administered liberally from the beginning to the end of many of the acute general fevers and some chronic affections, or drank in the form of beer, wine or distilled spirits as a beverage, the consequent impairment of nerve sensibility and force and the coincident impairment of oxidation processes necessary for healthy tissue metabolism and excretion, directly encourage fatty or atheromatous degenerations

*N. S. Davis, M. D., LL. D., (*Ibidem*).

in almost every tissue in the body, and especially in the stomach, liver, lungs, heart and kidneys, as may be seen illustrated in every case of chronic alcoholism. It is this effect of alcohol in diminishing the internal distribution of oxygen and also the activity of the nuclein and leucocytes of the blood, that makes the individual using it more liable to attacks of almost every variety of acute disease, whether epidemic or endemic, and lessens his vital resistance when attacked. So true is this, that every modern writer of note on practical medicine tells us that even habitual moderate drinkers of alcoholic liquor give a much higher ratio of mortality when attacked with cholera, continued fever, pneumonia, influenza, or almost any other acute disease, than the total abstainers. Even the more intelligent part of the non-professional public have come to quite generally recognize this inherent and inevitable power of alcohol to impair man's physical power and activity, and hence they prohibit its use in all circumstances requiring the highest degree of activity and endurance, whether mental or physical.

HEREDITY IN INEBRIETY.*

The problem of heredity—the transmission of parental and ancestral characters to each new generation of organic beings—is one of transcendent interest in biology at the present time, not only because it seems to hold the key to a large part of evolution, but on account of its relations to many social, moral, and even political and religious questions. The laws of heredity, whatever they may ultimately prove to be, must necessarily govern the transmission of inebriety, and the facts of inebriety must occupy a place in the body of phenomena, by induction from which those laws will be formulated.

We know that every individual, even the most complex, takes its rise from the division and subdivision of a single cell or its nucleus, constituting the essential part of a bud or a fertilized ovum, in which latter case the nucleus itself results from the union or conjugation of a male and a female pronucleus,

derived respectively from each parent. But how is it that this extremely minute particle of matter can convey to the new being, into which it is destined to develop, the precise configuration of the parent form, nay, the very peculiarities, temperaments, and predispositions, not only of an individual, but of a family or breed?

The older and still popular idea was that the reproductive elements were, in a vague way, a sort of quintessential distillation of the parent body. Related to this, but elaborated to a high degree, and based in the true scientific spirit on the widest induction from masses of facts relative to reproduction in its various forms, development, reversion, and inheritance, both of ancestral and acquired characters, is Darwin's confessedly provisional hypothesis of "Pangenesis." Pangenesis "implies that the whole organization, in the sense of every separate atom or unit, reproduces itself. Hence ovules and pollen grains—the fertilized seed or egg, as well as buds—include and consist of a multitude of germs thrown off from each separate atom of the organization." "That all organic units, besides having the power, as is generally admitted, of growing by self-division, throw off free and minute atoms of their contents, that is, gemmules. These multiply and aggregate themselves into buds and the sexual elements, their development depends on their union with other nascent cells or units, and they are capable of transmission in a dormant state to successive generations."

Wholly different in its fundamental conception, and sharply contrasted with this, is Weismann's theory of the "Continuity of the Germ Plasm," so called, which teaches that "the germ cells are not derived at all, as far as their essential and characteristic substance is concerned, from the body of the parent, but directly from the parent germ-cell, from which the individual has also arisen; so that heredity is brought about by the transference from one generation to another of a substance with a definite chemical and, above all, molecular constitution," and, "from this identical starting point an identical product necessarily arises." To bring out his meaning rather more clearly: "In each onto-

* Thomas Morton, M. D., M. R. C. S., before the English Society for the Study of Inebriety at London, 1894.

geny (or generation of a new individual) a part of the specific germ plasm contained in the parent egg-cell is not used up in the construction of the body of the offspring, but is reserved unchanged for the formation of the germ cells of the following generation." It is interesting to compare this with the words of Francis Galton, who, in 1872, anticipated Weismann by saying that "each individual may properly be conceived as consisting of two parts, one of which is latent and only known to us by its effects on his posterity, while the other is patent and constitutes the person manifest to our senses." This idea of the *soma* or body as, so to speak, a sort of appanage of the germ plasm, runs through all Weismann's work, and he even, in metaphor, compares the germ plasm to a creeping underground root stock which throws up leaf shoots at intervals.

It is obvious that, on such a conception as this, the latent qualities of the germ plasm must entirely control and dominate the sensible characters of the body which expresses them, but can have little or no reciprocal influence on the germ plasm.

Weismann and his school almost wholly disbelieve in, and take great pains to dispute, the hitherto received idea of the transmissibility of acquired characters, which Darwin and most English biologists have assumed to play a considerable, though subordinate, part in the process of evolution. And, with reference to this question, he draws a distinction, which is certainly valuable and tends to clearness, between characters acquired, or supposed to be acquired in the ordinary sense, by the effects of the use or disuse of organs, by habits of life, or the reaction of the organism under the various influences of the environment, and those which are acquired in the course of evolution by spontaneous variations controlled by natural or artificial selection. These latter are really potentially present in, and depend upon, molecular changes in the germ plasm, before they make their appearance in the *soma* or body, and he proposes to call them *blastogenic* in contradistinction to the former, which he terms *somatogenic*.

It is at once evident that an inebriate

tendency arising from the intemperance of a parent, must fall under the *somatogenic* category, and consequently be disallowed by Weismann and his school. So that if his theories are to be accepted in their entirety we must say good-bye to a belief in inebriate inheritance as ordinarily understood.

But are they to be accepted in their entirety? When I spoke of the theory of the Continuity of the Germ Plasm as holding the field, I did not, of course, mean to imply that it might now be regarded as established, but merely that it occupies such a position that round it the battle chiefly rages, and upon its proof or disproof the issue of the controversy must mainly turn.

It has the support of great English authorities, among whom I may name Alfred Russell Wallace and Ray Lancaester, but it is incompatible with the teaching of Herbert Spencer, who attaches the greatest importance to the influence of the environment, not only on the individual but on the race. It traverses that of Darwin, who, down to a late period of his life, admitted that "a great value must be given to the inherited effects of use and disuse, some also to the modifications in the direct and prolonged action of changed conditions of life." Prof. Vines has published a searching criticism of Weismann's views. Prof. Turner describes himself as "unable to accept the proposition that *somatogenic* characters are not transmitted," and adds, "I cannot but think that they form an important factor in the production of hereditary characters." Even Francis Galton, who anticipated the theory, makes a similar admission; though he says, "the effects of use and disuse of limbs and those of habit are transmitted to posterity in only a very slight degree."

Here is the weak point in Weismann's teaching, and he will not succeed in making good the absolute seclusion of the germ plasm from all somatic influences, upon which he insists with the warmth of a partisan and with excessive ingenuity. His teaching is probably in the main true. At any rate it has to be reckoned with by those who wish to retain that most powerful argument for abstinence which is based upon the assumed transmission of the physical re-

sults of intemperance to generations yet unborn.

How, then, do we stand who not only wish but are convinced from what we have ourselves seen of inebriety, that there is truth in the assumption on which the argument is based.

It seems to me that the time has come for considering the assumptions on this subject which pass current among us, defining them more carefully, and attempting a positive demonstration of so much of them as can be proved. And this not only in the interests of truth and for our own satisfaction and encouragement in our warfare with drink, but in order to compel the attention of that enormous public, of all grades of intelligence, who will not take the trouble to listen to or understand us, and who more or less consciously justify themselves by regarding us as prejudiced enthusiasts. If what we have believed and taught on this particular subject cannot be maintained in all its fullness, we ought to know it and modify our teaching accordingly. If it can, the biologists ought to know it, and it is sure of a hearing, as it bears directly upon the vexed question of the transmission of acquired characters.

My object is not to attempt any such demonstration, but after pointing out the importance of its being given at the present juncture in the course of scientific thought and of temperance advocacy, to indicate the chief difficulties which beset the task and the lines upon which it should be attempted.

1. In existing statistics on the subject it does not seem to be sufficiently recognized that it is one thing to establish the fact that the children of intemperate parents are apt to be afflicted with degeneracy and various neuroses, and another to prove that they inherit a special proneness to inebriety. The class of observations available for the latter purpose is much narrower and more difficult to verify than for the former. Both are available for temperance advocacy, but the latter is what the scientific world wants and will listen to.

2. It is not sufficient to show that a large number of degenerates and inebriates have intemperate parents, or, conversely, that intemperate parents produce a large number of degenerates

and inebriates, without knowing, as a standard of comparison, what proportion of the general public have intemperate parents, or, conversely, what proportion of degenerates or inebriates average parents produce. The late Professor Demme, of Stuttgart, evidently recognized this, and based upon it some excellent work in the comparison of the direct descendants of ten families of drunkards, and ten with temperate parents. The results were very striking as to degeneracy, but less so as to inebriety.

3. It must be remembered that mere degeneracy or insane neurosis involving defective control, not necessarily depending on alcoholic abuse in the parents may show itself in the form of alcoholic excess if circumstances favor that particular form of excess instead of some other. Many typical inebriates have an insane parentage, and such cases go to prove inebriety to be a neurosis, but do not prove the transmissibility of an acquired taste for alcohol.

4. It seems to have been taken for granted that, when the link of parentage exists between two inebriates, the link of heredity may safely be assumed; but we know well that drinking habits will of themselves establish a condition of inebriety in a person of sober parentage, and the children of drunkards are more likely than others to acquire an inebriate constitution in this way, from early familiarity with alcohol. This is an objection peculiarly difficult to meet, even in those strong cases where two or three brothers or sisters are similarly affected; as the only cases which would afford a standard of comparison would be those of the children of temperate parents brought up by intemperate relatives. A somewhat similar objection might be urged as regards degeneracy. The mortality among the children of drunkards is known to be enormous, from the poverty, disorder, and misery in which they are commonly brought up, and many of those who survive may naturally be expected to be puny and feeble in body and mind, independently of any congenital defects they may bring into the world with them.

So much for the objections which fairly lie against assuming as a matter of course that acquired inebriety may be

transmitted to descendants. If they are to be fairly met it will be necessary to sift and rearrange the data which we already possess, with constant reference both to some such standards of comparison as I have suggested, and to the distinction between general degeneracy and the special inebriate condition. And they should be supplemented by further observations upon Demme's excellent plan.

After all, the proof of such a proposition must necessarily be of a cumulative kind, and rest upon the convergence of several lines of argument, neither of which is absolutely conclusive in itself. And there is one special set of cases which afford perhaps the strongest argument of any. I mean those of remarkably precocious inebriety, if, as I believe, they are never met with except in the families of intemperate persons. Observations on this point are much needed and would be of great value.

Let us now, quitting fact for theory, turn again to the biological aspect of the question, and, admitting almost completely Weismann's contention that the characters impressed on the germ are, so to speak, antecedent to and independent of those which its bearer's life history may impress on his or her *soma*, and that there does not exist any mechanism by which these latter can be impressed upon or registered in the germ, let us enquire whether there does not nevertheless exist a mode in which the bearer's drinking habits may, and indeed must, affect it or the being into which it is destined to develop. "The blood is the life," and even the exclusive and independent germ plasma must share in the life of its bearer so far as to be nourished and kept alive by the same blood stream. If this blood stream is constantly poisoned at its source by a large infusion of a soluble substance inimical to healthy cell life, and especially to that which is youngest and that which is most complex, should we not confidently expect the tremendous but exquisitely delicate potentialities of the germ cell to suffer some disorder? If this be admitted of the quiescent unimpregnated germ, which has simply to maintain and multiply its life like some unicellular organism, what shall we say of the impregnated germ, which has en-

tered upon its career of development, and is drawing to itself large and hourly increasing supplies of nourishment, for many months, out of the maternal blood, which *ex hypothesi* contains alcohol in pathological percentage.

Do we not have here an ample and abundant explanation of the greater potency of inheritance through the mother, which seems to be acknowledged by all observers of alcoholic degeneracy, and which ought to be kept clearly in view in the future collection of statistics?

And we may even go further, and see with the mind's eye the genesis, not only of degeneracy, but of inebriety. We know that one of the characteristic properties of alcohol is to establish a tolerance of itself in tissues where its presence was at first resented as a disturber, and before long to become apparently so indispensable to their smooth working that its temporary absence is felt to be intolerable. Where alcohol is a constant constituent of the nutritive fluid, it is easily conceivable that the nine months of intra-uterine life may suffice to establish in the tissues of the embryo such a tolerance of alcohol, or intolerance of its absence, as may be readily revived again from time to time during childhood, by the taking of alcohol, and finally re-establish in later life. The tissues seem to have a sort of memory of their own, in virtue of which they, as it were, recognize and respond to familiar stimuli when again brought into their presence after an interval.

I am painfully conscious that I occupy to-day the unpopular position of *advocatus diaboli*. But, as the result of that functionary's labors is usually to establish more firmly and indisputably the sanctity of the person whose claims to canonization he opposes, so I trust that my criticisms will lead in the end to the clearing up of all doubt and confusion on the subject of hereditary inebriety, and to the placing of it beyond all cavil or question.

RATIONAL THERAPY OF ALCOHOLISM.*

The author divided his subject into acute, subacute, chronic and periodic alcoholism.

Acute poisoning with alcohol mani-

* F. W. Antoninus Fabricius, M. D., (*Medical News*, May 4, 1895.)

feats itself in one of two forms. One, the anæmic variety, is usually produced by the sudden admission of large amounts of raw spirits into the stomach, a dangerous and possibly fatal condition of shock resulting therefrom. The countenance is pale, the pupils dilated, the pulse feeble, rapid and irregular. In such cases, immediate assistance to the heart is required to prevent fatal syncope, and before attempting to empty the stomach a hypodermic injection of nitro-glycerine with atropin, or of sal volatile, should be administered. The stomach tube is then passed and the viscus emptied thoroughly and washed out, a little warm milk, olive oil and chloride of sodium being left within it as a local sedative and mild laxative. This is to be followed by a hot pack if the temperature is subnormal, and by hypodermic injections of strychnine or nitro-glycerine if necessary. As the patient recovers he is very likely to fall into a deep sleep, from which he should not be aroused.

In the second or congestive type of acute alcoholism the onset is far slower, and the patient is suffering from an alcoholic toxæmia rather than from shock, although the temperature may be subnormal and the pulse feeble. Narcosis is rarely so profound that stimulation, as by a sharp rap on the soles of the feet, is not followed by response. In these cases the stomach should first be washed out and a good dose of Epsom or Rochelle salts left within it. The action of the bowels and of the skin should be established as quickly as possible—the former, if necessary, by enemata superadded to the salts already mentioned; the latter by the use of the hot pack and free massage. Convulsions are occasionally seen in this stage, resulting probably from a passive hyperæmia of the cortex, and should be treated by a hypodermic injection of morphia with chloral and bromide by the rectum, and possibly croton oil by the mouth, to induce rapid and vigorous purgation.

Subacute alcoholism means a condition when the drinking habit has become so established that enormous doses are required in order to satisfy the morbid craving for the poison, which is slowly if surely disorganizing the patient's nervous system. Any acute disease affecting such an individual is very likely to

lead to the severest prostration, and possibly may manifest itself in an outbreak of delirium tremens. Complete abstinence is not advised in such a condition, the chief aim being to substitute a milder and less injurious agent for the raw spirit, and also in diminished quantities. For the distressing morning sickness so characteristic of this affection nothing can compare with the gastric siphon, in the author's opinion. The stomach should be washed out daily at first, and preferably before the midday meal, with a weak alkaline solution, and if constipation is present a dose of salts may in this way be readily administered. An hour afterwards an antiseptic should be given in the form of salol, naphthalin or sodium salicylate, whilst the general health is braced up by nux vomica, cinchona and capsicum. A fairly generous diet is admissible, varying according to the digestive powers of the patient. Insomnia must be treated if present, and trional is recommended, although its power is soon lost, and it must be used alternately with other hypnotics. Chloral is contraindicated in old alcoholics, owing to its influence on the heart. To relieve the morning sickness various agents are suggested, such as a cup of hot tea or coffee the first thing in the morning, a glass of cold effervescing mineral water, an icebag or a hot fomentation to the epigastrium, or perhaps, better still, the administration of small doses of cocaine by the mouth. To reduce the morbid craving for the drink, nothing succeeds so well as rapidly increasing doses of strychnine given hypodermically, combined occasionally with hyoscyamine.

The treatment of chronic alcoholism where the viscera are extensively diseased is always extremely unfavorable. Iodides which have the repute of benefiting sclerosed tissues may be tried with care, but as a rule the chief indications are simply for symptomatic treatment.

Periodic alcoholism or dispomania is looked on essentially as a monomania, which can be dealt with efficiently only in a suitable hospital or asylum. Alcohol must be strictly withheld, and powerful sedatives exhibited near the time of the expected attack. The prognosis is always extremely bad.

ON THE CURE OF DRUNKARDS.*

In this communication Dr. Forel answers some objections which have been raised to the method of treatment of drinkers in Switzerland. He has never found any harm arise from stopping completely the supply of alcohol at once to his patients, and usually finds that as soon as the delirium ceases they develop an excellent appetite. Of course those cases are excepted in which a fatty heart or organic lesions of the viscera are present. He seeks to supply the need occasioned by the absence of alcohol in temperance drinks by various fruit extracts, and mentions especially an extract of orange peel, which can be sold at a much cheaper rate than any alcohol. He emphasizes the necessity for the formation of suitable cheap temperance restaurants, or, as they are called in Switzerland, "*cafés chocolats*," and of temperance societies founded on various bases, some religious and others social in character; so that whatever the individual proclivities of the patient may be, he may find assistance outside of the asylum. Relapses must be looked for, but he agrees with other doctors in maintaining that a patient can be cured even after several such occurrences. He criticizes unfavorably the large American asylums, where a great number of patients are gathered together, and close personal study of the particular individuals becomes impossible. On the other hand, he thinks that the plan of building rural village colonies is much to be preferred, where perhaps not more than a dozen patients are dealt with in a separate building, superintended by a responsible and suitable agent.

ALCOHOL AND ALCOHOLISM.†

A most admirable and well-balanced article on the subject of alcoholism, looked at from a strictly scientific and philanthropic standpoint, and entirely devoid of anything that can be called fanaticism. The steady increase in the production of alcoholic drinks and in their consumption in France is first alluded to and proved by means of statis-

tics, which also bring out the fact that the drinking habits of towns and great cities are much greater than those of the country, the mean consumption per head being greatest in Paris. The toxic character of various alcohols is then alluded to, and the well-known fact commented on that the higher the atomic weight the greater the toxic powers; and hence those products which are distilled from cider, perry, grains, molasses, or potatoes are infinitely more noxious than those derived from wine or the juice of the grape. The character of the ferment and the conditions under which distillation is undertaken, also influence the result to a marked degree. Hence it is evident that many of the results attributed to excessive drinking are due not so much to the amount of alcohol imbibed as to the toxic character of the compounds associated with it. The pathological results of alcoholism are then alluded to *in extenso*, special emphasis being laid on those affecting the nervous system, and on the influence exerted on the progeny of chronic drinkers in the production of epileptics and idiots.

The most interesting section of this communication is that dealing with the question of prophylaxis by legislative means.

Increasing the taxes on alcohol has often been undertaken, and always leads to the same results—viz., an increase of revenue with a scarcely appreciable, if any, diminution in the amount of alcohol used. Freeing the so-called hygienic drinks (tea, coffee, wine, beer, and cider) from taxation and placing a heavier impost on the poor potent fluids has just as little effect, as has been demonstrated in several States of America.

Reducing the number of licenses theoretically is an excellent idea, but it must be remembered that the number of licensed houses is the result and not the cause of the large consumption of alcohol, and practically it has not been found to be of much use alone. If, however, a reduction in the number of licenses is associated with measures restricting the production of alcohol and improving its purity, then satisfactory results may be expected to follow.

The Norwegian or Gothenburg system follows much along the lines just

* Dr. A. Forel (*Gazette des Hôpitaux*, March 4th, 1895).
† Dr. J. Roubinowitch (*Gazette des Hôpitaux*, Feb. 26th, 1895).

indicated. Both the production and the retailing of alcoholic drinks are in the hands of the authorities, and by this means a pure article of less strength can be placed on the market, whilst both the State and the local authorities benefit from the traffic thus established. In Sweden the consumption of alcohol, which in 1871 to 1875 was 5.4 litres per head of the population, had diminished in 1886 to 1890 to 3.4 litres; and in Norway during the same periods from 2.4 to 1.5 litres. Lately there has been an increase in the amount used in Norway owing to the growing use of beer.

The Swiss system of State control deals mainly with the rectification of the alcohol, and has been found to work well both from a financial and from a medical point of view. The increased income is applied to combating the bad effects of intemperance by helping in the formation of inebriate homes and asylums, by assisting and protecting abandoned and orphan children, by subsidizing popular restaurants and canteens, and by diffusing useful and beneficial instruction of the people.

Finally the system of total prohibition as employed by six States in America has the merit of going to the very root of the matter, and especially in Maine has worked one of the most happy revolutions. The difficulty of enforcing such a system is the main objection to it.

The practical suggestions made by the author in order to combat the increasing influence for evil of alcohol are:—

(1) Taxes on alcohol must still be maintained owing to the impossibility of raising a sufficient revenue without them.

(2) The State must assume the duty of preventing the issue of impure drink, and must thus control the rectification of the alcohol.

(3) A reduction of the amount consumed must be attempted, partly by reducing the number of licensed houses, partly by taxing heavily the more potent liquors, whilst the weaker—*e. g.*, wine, beer and cider—are exempted from taxation.

(4) Temperance societies must be started and maintained both to help those who have been reclaimed from drunkenness and to stimulate public

opinion. Mention is made of several very successful Swiss and French societies.

Finally Dr. Roubinowitch discusses the treatment and best means of assisting those who have become the victims of alcohol. He insists on the paramount importance of separating them from their old surroundings in homes, which must, however, be clearly distinguished from houses of correction and prisons on the one hand and from lunatic asylums on the other. For chronic drinkers who, though imbibing to excess, are rarely drunk he advises separation in what he terms "the home of abstinence and work," where total abstinence from alcohol is combined with physical work, especially in the open air. Some such patients are endowed with strong wills, and will readily be cured, whilst others will with difficulty be affected for good owing to their weak constitution of mind. For those whose mental powers and nervous system have been disordered through their excesses, special asylums should be set apart; some of the patients will be absolutely incurable, and must remain immured for life, whilst others will recover, and then, before sending them back to their occupations, a term should be spent in the "Home of Abstinence and Work." For those suffering from visceral affections, as of the liver, kidneys, stomach, etc., special abstinence hospitals ought to be founded. Certain steps towards these *desiderata* have already been taken in several places both in Switzerland and in France, but until there is more efficient State control of the liquor traffic the whole system cannot possibly be carried out.

Nephritis of Pregnancy.

Gossmann (*Münch. med. Woch.*, No. 26, 1895) does not find that this disease necessarily ends in chronic nephritis. He saw it recur in one patient during eight pregnancies, but she is still free from kidney symptoms when not pregnant. He finds that induction of labor by means of vaginal douches is perfectly simple, and in two cases this means alone proved sufficient. In one of them the child was saved and reared.

THE MEDICAL AND SURGICAL REPORTER

ISSUED EVERY SATURDAY

THE BUTLER PUBLISHING COMPANY, Publishers P. O. Box 843

104 Girard Building, Philadelphia, Pa.

HAROLD H. KYNETT, A.M., M.D., Editor

Entered at the Philadelphia Post Office as second-class matter.

TERMS:—Three Dollars a year in advance. Sent four months on trial for \$1.00.

REMITTANCES should be made payable to the Publisher only, and should be made by Money Order or Registered Letter.

NOTICE TO CONTRIBUTORS:—We invite contributors of value to the profession, and if published originally in THE REPORTER such will be paid for at liberal rates, or a limited number of copies of THE REPORTER will be supplied, as the author may elect. Hereafter where reprints are desired writers are requested to make a note of that fact on the first page of the MS., but must order reprints directly from the publisher, who will supply the same at cost rates. Contributors should inclose stamps for postage, that the articles may be returned if not found available.

PHILADELPHIA, SATURDAY, OCTOBER 5, 1895.

CORRESPONDENCE.

LETTERS TO MY ASSISTANT.

[Number 3.]

SERUM THERAPY; COLPOTOMY; PERSONAL NOTES; LOCAL ANESTHESIA.

BERLIN, SEPT. 11, 1895.

DEAR DOCTOR RECKEFUS:—Nearly four weeks since coming to Berlin, and the time has pleasantly passed, chiefly in attention to professional matters, some of which will now be stated.

The remarkable address before the Congress of Medicine, at Bordeaux last month, by Professor Bouchard, devoted to serum therapeutics (he has contributed largely to this treatment) concluded in these words: "Do not imagine, gentlemen, that the great therapeutic progress of which we salute the advent, will shake the ancient edifice of medicine, for it will only consolidate it; the new remedies have their place already prepared, and like the old ones, most frequently solicit the curative power of nature."

In Berlin I find applications of serum in therapeutics made by Dr. Schleich, which widen its field, and which are altogether novel to me. For example, Dr.

Schleich, whose special work in renouncing general, and employing only local anesthesia in all operations will be presented in another part of the letter, dresses wounds with powdered serum, uses various pastes in which this is an ingredient, indeed has several ways of employing serum locally. So that you see between the hypodermic application of serum and its external use, this agent is taking an important place in therapeutics. Is serum to become as essential in pharmacies as bay rum in barber shops?

Dr. Martin, whose kindness to me I can never too highly appreciate, and for which I can never make adequate return, was here for several days after my arrival, and I witnessed many operations by him. Of course you know he is probably the most rapid operator in the world; for example, the time occupied by him in the doing an uncomplicated ovariectomy, is about ten minutes, that

is, it is ten minutes from the time the abdomen is opened until it is closed. I am quite sure that this celerity is in part due to the able assistance of Frau Horn, who stands at the side of the patient—Dr. Martin, as his father did, as Professor Winckel does, sits between the patient's lower limbs in all laparotomies—and has ready the instant it is needed knife, scissors, sponge, needle, suture or ligature, indeed anticipates rather than answers wants. She has been with Dr. Martin ever since he established his hospital, now about fifteen years, and has sole financial charge of the institution. Frau Horn is indeed a woman of wonderful ability, and would have succeeded in almost any occupation requiring a superior brain. But nearly two weeks ago I sent to a New York monthly journal a sketch of her, with photograph, which I hope will soon be published, and therefore I omit any further reference to her in this letter.

Colpotomy rules the hour in Berlin, and consequently the number of laparotomies is notably lessened; so too, colporrhaphies decrease. There have been done within a year at Dr. Martin's hospital, more than one hundred and twenty colpotomies; most of these, of course, by Dr. Martin. The applications of colpotomy are for the removal of diseased tubes, or diseased ovaries, of certain uterine myomata, and for the purpose of making vagino-fixation in posterior displacements of the uterus. Of course, too, vaginal extirpation of the uterus is a colpotomy. In one of the colpotomies I saw Dr. Martin perform, the uterus was so firmly bound down by posterior adhesions that the forceps applied to it to drag it forward tore the tissues into the cavity of the organ; the resistance was finally overcome, and the uterus everted through the opening in the anterior wall of the vagina, the torn tissues resected, and the wound closed with catgut; then the operation of stitching the fundus in anteversion was completed, and the vaginal incision closed; the patient did well. One of the most interesting cases I saw was the removal of the tubes for pyosalpinx, by abdominal section, and within ten minutes after the completion of the operation the demonstration of the gonococcus as the cause of the inflammation.

The pathological work done in Dr. Martin's as in others hospital here, is great and valuable. Many of these private hospitals have a wealth of carefully preserved pathological specimens that would be invaluable in some of our schools. As I have seen some of these collections I could not help recalling one of Lord Bacon's wise remarks: "Money is like muck, not good except it be spread," and wondering whether a wider diffusion of these valuables would not increase their value.

Dr. Martin's "poliklinik" has many thousands of patients every year; one day, for example, there were one hundred. Of course with such a great number of dispensary cases, and his large number of private patients he has no lack of important operations.

Dr. Mackenrodt, once Dr. Martin's assistant, has now a "klinik"—by the way, the number of "kliniks," "polikliniks," and "private kliniks" in Berlin is so very great, I sometimes meet with two or three in walking a square—and I saw some interesting operations by him, among them vaginal extirpation of a cancerous uterus by the thermo-cautery.

While, as I have said, colpotomy is very frequently done in Berlin for the remedying of retroversion and of retroflexion of the uterus, it is not always an operation without unfavorable accidents or consequences. The ureters have been injured, and I have been informed that cases of stone in the female bladder are becoming less rare. Not very long since a patient upon whom Dührssen had operated was pregnant, and in her labor, the anterior wall being so firmly fastened down, the development of the uterus having been only of the posterior wall, delivery was impossible through the vagina; the Cæsarean operation was done by Professor Gusserow, and the patient perished of secondary hemorrhage. Fixation of the uterus is essentially a violation of the law that the uterus is a mobile organ, and some operators, Landau for example, restrict the vagino-fixation to those cases in which it is impossible to wear a pessary.

Dr. Landau, the assistant for several years of Spiegelberg, has one of the best private hospitals I have ever seen. I could not ask either of Professor Landau,

nor his brother, who ably assists him, as to the cost, but while conversing with Dr. Wanscher, Professor in the University of Copenhagen, whom I frequently met at Dr. Martin's hospital as well as at Dr. Landau's, he suggested that the ground, building and equipments would require about one million marks. Only think of a doctor expending two hundred and fifty thousand dollars for a private hospital! By the way, Dr. Wanscher tells me that the University of Copenhagen, the only medical school in Denmark, requires six years' study on the part of its candidates for a degree. Thus it is seen that the Danes are next to the Hollanders in the period of medical instruction. I believe Sweden, too, requires six years.

My thoughts reverting to Holland for the moment, I fear that in the letter hurriedly written you from Rotterdam, I sent the Mayflower from Delftshaven with the Pilgrim Fathers, who had been sojourning in Holland. If I did let me retract the statement, for they went first to Southampton, and there embarked upon the Mayflower.

And now returning to Dr. Landau. He is a man of between forty-five and fifty, of delicate organization, and his manner, so cordial and refined, and his appearance and intellectual expression impress the stranger most favorably. In his operations he always uses ether (chloroform is the anesthetic generally employed in Berlin), but immediately that the operation is ended the patient inhales oxygen for a few minutes, and the consequence is that there are no unpleasant after-effects of the anesthetic, such as vomiting or head-ache. I know this, not only from the statements of Dr. Landau, but from several of the patients themselves. One of the most interesting operations I saw done by him was the removal, by colpotomy, of a myoma the size of a walnut, from the anterior wall of the uterus. The operation was done easily and quickly. There were colpotomies too, for the removal of diseased tubes, and several laparotomies for large ovarian tumors.

Dr. Schleich's "klinik," for surgery and diseases of women, is held every Tuesday and Saturday morning, from 10 to 12 o'clock, at No. 250 Friederich Strasse. I mention these facts for the

benefit of those doctors from our country who may visit Berlin for the first time, and who will surely desire to witness Dr. Schleich's operations and study his method.

I read the following lines on the wall of the "klinik" room:

Prasento ægroto
Taceant colloquia
Effugiat risus,
Dum omnia
Dominat Morbus.

Asking Dr. Witto Wittkowski, Dr. Schleich's assistant, as to their authorship, he informed me that Dr. Schleich wrote them. Dr. Schleich is about thirty-seven years old. He was one year assistant to Professor Olshausen, and several years to Professor Helferich, Griefswald, and also for a time to Virchow. He has been nearly four years working with local, as a substitute for general anesthesia, and last year he published a work of two hundred and fifty pages upon the subject, *Schmerzlose Operationen*. Those who would understand his theory and method should study this book. He believes that at least ninety per cent. of all cases in which narcosis is employed for operations may be set aside by his method. He has three different hypodermic solutions employed as may be required, and I give the formula for each:

NUMBER 1.

Sod. chlorid. (2 parts).
Cocain muriat (1 part).
Morph. muriat ($\frac{1}{4}$ part).
Distilled water (1000 parts).

NUMBER 2.

Sod. chlorid. (2 parts).
Cocain (2 parts).
Morph. ($\frac{1}{4}$ part).
Distilled water (1000 parts).

NUMBER 3.

Sod. chlorid. (2 parts).
Cocain ($\frac{1}{8}$ part).
Morph. ($\frac{1}{4}$ part).
Distilled water (1000 parts).

I have seen several operations done by Dr. Schleich, which were painless, and only local anesthesia was employed. Three of these operations were: Removal, in a young man, of an ingrowing nail of the big toe, after the removal

the diseased tissue was curetted; extirpation of a tumor the size of a man's fist from the anterior wall of the chest in a lady, apparently about forty; and removing depressed bone of the skull, the subject being a boy of ten years, who, from a fracture occurring two years before, had epilepsy. Before an operation the part is well washed with marble soap, that is, a soap having intimately incorporated with it marble dust. Next it is washed with alcohol, and then a napkin dipped in a corrosive sublimate is applied. Next a few drops of "æthylchlorid" is applied to the skin so as to make it insensitive to the hypodermic needle puncture; and in half a minute the punctures are begun. The syringe usually employed is at least four times the size of that in common use. The first injection is superficial; it prepares the way for deep injections should these be necessary, and also for injections over a larger extent. For injection after injection is made, the needle penetrating each time in the territory that has been anesthetized, the several punctures being not more than the fourth of an inch apart. The injections cause the part to become immediately swelled and white—white as if the flesh of a corpse—and there is a temporary local death. I did not depend upon the response made by any patient to the question as to feeling pain, but I watched the face, and also observed the perfect quiet of the body. It seems to me that the three cases which I have mentioned are conclusive as to the value of Dr. Schleich's method. In the case of the tumor removed, not only was that removal painless, but also the stitching together of the margins of the crucial incision, and I suppose that there were nearly twenty stitches introduced.

I have mentioned the use made of serum powder by Dr. Schleich. There are several other preparations peculiarly his. Thus, instead of the ordinary mercurial ointment employed for introduction of mercury into the system through the skin, he has rubbed into the surface a mixture of mercury, serum-paste, and pepton-paste. The pepton-paste is made of pepton, gum arabic, glycerine, water, acetic acid, and talc powder. He uses successfully in endometritis an application composed of

pepton and iodoform, the unpleasant odor of the latter being entirely destroyed by a few drops of oil of melissa.

Dr. Schleich has been for a few weeks experimenting with a new preparation he has made as a dressing for wounds, more especially if suppuration has occurred, and he calls it nuclein. Neither the mode of preparing nuclein, nor its exact composition, did I learn from him, but when he has a sufficiently large experience to prove its value—so far, the results have been satisfactory, almost surprising—he will publish a complete account of the medicine and its use. I have seen him apply it to a bubo after the pus had been evacuated, and in several other cases. Another new preparation he is experimenting with is cocain in as a substitute for cocain. The former is an artificial product, made by Synthesis, a German manufacturing chemist. It has the chemical composition of the vegetable product, and can be furnished at half the cost. So far as Dr. Schleich's experiments are concerned the results are precisely the same as those obtained with cocain.

The marble soap referred to is not only used upon the part to be cut, but is also employed by the surgeon and his assistant to thoroughly cleanse the hands before operating.

Has Dr. Schleich's method been accepted in Berlin? Only by a small minority. Yet I am told that a few weeks ago von Bergmann used it, giving Dr. Schleich proper credit, in a public clinic, in the case of a patient whose heart was in such condition that anesthesia by inhalation was forbidden.

Dr. Schleich seems to be a man of great natural force, of originality, and of perseverance; he is an irrepresible. A prominent Berlin physician, an authority in nervous disorders, and who is personally known by several members of the American profession, himself a believer in Dr. Schleich's method, excused the slowness to believe in it on the part of Germans, as simply characteristic of their general unwillingness to hastily accept new things. Unquestionably the painless removal of a large lipoma, which I have referred to, no anesthetic inhalation being used, seemed to me one of the greatest triumphs of surgery. Dr. Schleich and his

method made a most favorable impression upon me, and I believe it only a question of time as to the general recognition of his important work.

September 13th.—My letter has been accidentally delayed, and I briefly add that I have been at Landau's "klinik" to-day, where I saw two cases of vaginal extirpation of the uterus by Dr. Theodor Landau, and also at Dr. Schleich's. The case of removal of depressed bone in a boy who had epilepsy has done very well, not one fit since the operation, though previously there were several every day. The boy looked bright and cheerful as he entered and left the room. He goes home on Monday. At Dr. Landau's I met with one of the five female physicians in Berlin, a very bright woman, the daughter of a general in the German army. She was formerly in Professor Winckel's Frauenklinik. The resident physician of the hospital, I may mention, is a graduate of the University of Bavaria, and spent a year in the Frauenklinik. Both of these doctors spoke so highly of Professor Winckel, for whom, as you know, I have the greatest admiration, and to whom I am so strongly attached that it made my heart glad, for just praise of a friend is always pleasant.

But I must close this letter in order that it shall go by to-morrow's steamer, and in a few days I follow it, returning, after a pleasant summer vacation, to my work. I must delay, until my return, any special account of the Bordeaux Congress, and then the story will be oral instead of written.

Respectfully,

THEOPHILUS PARVIN.

Pilocarpine to Abort Pneumonia.

EDITOR MEDICAL AND SURGICAL REPORTER.

Sir:—Since this is an age of advancement by means of experimentation, it behooves every intellectual member of the profession to lend individual assistance in promoting, in every way possible, that end.

For the past fifteen years I have used the muriate of pilocarpine hypodermically, for the purpose of aborting pneumonias and threatened fevers of various

types, but more especially of the remittent and intermittent forms. For instance, where, from a recent attack of cold, a patient is threatened with pneumonia *per se*, or as a sequence to other diseases and fevers of a traumatic form, I at once inject into the arm one-fourth grain of muriate of pilocarpine dissolved in fifteen minims of aqua laurus cerasii at a temperature of 98° F. By this means I have never failed to promote profuse diaphoresis and thus have prevented threatened attacks of pneumonia, or any other inflammatory disease.

I should use the remedy more frequently than I do, if it were not for the exorbitant price we have to pay for preparations of pilocarpine.

A. O. STIMPSON, M. D.

THOMPSON, PA.

The Rush Monument Fund.

BALTIMORE, Sept. 23, 1895.

EDITOR MEDICAL AND SURGICAL REPORTER:—

The sum total of the Rush Monument Fund to date amounts to \$3,357.39. Among the recent contributions are the following:

Prof. Nicholas Senn, Chicago, .	\$100 00
Dr. Geo. M. Gould, Phila., . .	5 00
Dr. Franklin B. Ferguson, Deer Island, Me.,	2 00
Dr. Andrew Annan, Emmitsburg, Md.,	50 00
Dr. Jacob L. Williams, Boston, Med. Soc., Wayne Co., N. Y., (through Dr. D. S. Colvin,)	10 00
Dr. J. R. Buist, Nashville, Tenn.,	5 00
Dr. Jno. B. Hamilton, Chicago, Dr. Geo. N. Acker, Washington, D. C.,	1 00
Surg. Gen. Geo. M. Sternberg, U. S. A.,	10 00
Eastern Ohio Med. Association, (through Dr. J. C. M. Floyd,)	10 00
Dr. W. H. Marsh, Solomons, Md.,	1 00

Further subscriptions will be acknowledged in these columns.

Very truly yours,

GEORGE H. ROHÉ,

Sec'y and Treas. Rush Mon't Committee.

SOCIETY REPORTS.

THE BRITISH MEDICAL ASSOCIATION MEETING OF 1895.*

It is now twenty-two years since the British Medical Association met in London, and in commencing a *résumé* of the work done on the present occasion one must be forgiven for looking backward and comparing and contrasting the state of affairs medically then and now. Sir William Fergusson, the President, was at that time approaching the end of his distinguished career, and Lister's influence was only just beginning to be generally felt. The most important address was that on Surgery, delivered by the late Professor John Wood, who dealt amongst other subjects with the treatment of wounds by the antiseptic method, to which he accorded only a half-belief, as from his experience it was scarcely to be trusted when erysipelas had manifested its presence in the wards, and he was urgent in demanding statistics in support of the Listerian claims. Mr. Callender and other surgeons also expressed the opinion that hygiene and suitable medical treatment had as much to do with the improved results of surgical operations as the use of antiseptics. Things are indeed changed at the present day, when the bacterial origin of infectious diseases is everywhere firmly established, and the anti- or a-septic treatment of wounds is universally practised. One disease after another is being proved to be due to some specific microbe, and bacteriology reigns supreme in the pathological world. Those, then, who had the privilege of being present at King's College Hospital, at the presentation of a testimonial in the shape of his painted portrait to Sir Joseph Lister, felt that it was a good and fitting commencement to the engagements of the Conference week on the present occasion. Sir John Erichsen paid a most graceful and fitting compliment to his former pupil in making the presentation, and the ac-

count given by Sir Joseph of the way in which he had been led on from one thing to another in the perfecting of his system was fascinating and memorable. His concluding remarks, when he strongly urged them not to be misled by the attractive but misleading promises of asepsis, may well be laid to heart by practical surgeons.

The excellent, though inaudible, Presidential address on "The Power of Life in Life," coming from the lips of so experienced a physician as Sir Russell Reynolds, was an apt illustration of the direction in which all our chief advances have been made of recent years. The influence of glandular secretions on the metabolism of the body, the discovery of microbiology, and the installation of serum-therapeutics as a means of treating specific diseases, were alluded to by him as the chief manifestations of the fact that in living matter itself we have one of the most potent means of prolonging life and treating or preventing disease. The address on Medicine by Sir William Broadbent was retrospective in character, passing under review the well-worn topic of the advance of medical science from the time of Hippocrates and Galen down to bacteriology and antitoxins. Mr. Johathan Hutchinson took much the same line in his surgical address, reviewing the practice of surgery for the last century and a half. Though the subject-matter comprised much old and well-known history, several points of interest were brought out, and perhaps not the least of these was the frank admission that his own statistics in operating for stone by crushing, and in ovariectomy, had improved immensely since he had entrusted the performance to other hands; and on this ground he based a plea for the maintenance, and even extension, of specialism. Again, his well-known views on the subject of museum arrangements were brought to the front, and a more or less correct complaint

* This admirable summary of the Association proceedings is the editorial *résumé* appearing in the (London) *Practitioner* for the current month, and is extracted from that journal.—Ed.

lodged against the authorities of the College of Surgeons that they do not transform their magnificent museum into one suited for the teaching of clinical surgery, instead of allowing it to remain a resort for students learning elementary anatomy, and a "Golgotha of Anthropology." The last general address, that on Physiology by Professor Schäfer, was a welcome departure from the general antitoxic chorus, in that it dwelt with the other side of the President's address—viz., the effect of internal secretions. Surely there is much truth in the assertion often made that we as a profession are swayed to an undue extent by fashion in therapeutics. A year or two back nothing was talked of but thyroid juice and other similar vital preparations. Now this subject is thrust almost entirely into the background, and but for Professor Schäfer's notice would have gone almost without mention during the Conference. Certainly his address should be carefully read and studied by every medical practitioner who would keep abreast of recent advances in physiology; and, fortunately, it is as lucid and interesting in composition as it is suggestive and practical in substance. It is impossible here to do justice to its claims, and therefore we shall not discuss it, beyond saying that it is the most admirable dissertation published on a subject which has a most brilliant and useful future before it.

Bacteriology and its offspring Antitoxins formed almost the sole topics of discussion in the

SECTION OF MEDICINE.

Diphtheria, pneumonia, and acute rheumatism were the subjects selected by the authorities for the formal debates, and in each of them the iniquitous and ubiquitous microbes were held responsible as the causative factors, although with some difference in the degree of guilt. Thus no doubt was expressed as to the influence of the bacillus diphtheria in originating that malady. The activity of the pneumococcus was held by many, but not by all, to be responsible for the second complaint, most speakers agreeing that other conditions were also present; whilst as to rheumatism, the microbic origin of the disease is inferred, and extremely prob-

able, although at present not proven. Perhaps the chief point of interest in connection with the latter affection is the diversity of manifestations which are now ascribed, and apparently with justice, to a rheumatic origin. Thus, not only are the joint affections considered of this nature, but also many cases of tonsillitis, chorea, erythema, as well as the peri- and endo-cardial inflammations so often seen. The generally expressed opinion was that whilst some of these were caused directly by the microbe—*e. g.*, the arthritic conditions—others, such as chorea, were induced by the action of the toxins of the theoretical organism. Further investigations will be most anxiously awaited to ascertain whether this interesting conjecture is true or false. One voice was certainly raised against it in the most emphatic manner, viz., that of Dr. Haig, who, as is well known, maintains that all such conditions can be just as well explained by the theory that they are due to an abnormal formation of uric acid. It has been objected to his ideas that no evidence as to the existence of an undue amount of uric acid in the blood can be found. "Quite so," he replies; "it is not in the blood, because it is causing mischief by its presence in the joints, or elsewhere." Then, too, he emphasizes the influence of diet on the disease, all those food stuffs being harmful which tend to increase the amount of uric acid in the system. Turning now to the therapeutic side, nothing of an antitoxic nature can be suggested in rheumatism until the organism, if one exists, has been isolated; and hence the use of salicin and its derivatives has not been superseded. In pneumonia, an antitoxin was talked of by one or two speakers, but nothing very definite has as yet been accomplished along these lines. Salines are to be depended on as a general rule, and in certain conditions other drugs, such as caffeine, strychnine, antipyrin, etc., must be employed for the treatment of symptoms. Really the chief interest of the section centered around the discussion on the use and value of the diphtheria antitoxin. In opening the discussion Dr. Martin stated that one of the chief aims of physicians in the past has been to discover some means of

loosening the false membrane, and that comparatively little notice had been taken of the general symptoms. Since the discovery of the true nature of the disease—viz., that toxic bodies are produced and absorbed from the false membranes which act directly on the nerve centres—and since it has been demonstrated that bacilli in their growth produce substances capable of restricting their own activity, or of counteracting the effects of their own growth, micro-pathologists have been working at the means of producing and separating these valuable bodies so as to render them accessible to the practitioner. The success of the treatment of diphtheria by this means is on all hands admitted to have been very great, and perhaps no better evidence of this can be adduced than the statistics brought forward in the course of the discussion by Professor von Ranke, of Munich. He stated that in 1892 his hospital mortality was 52·2 per cent., in 1893 46 per cent., whilst in 1894 up to September it was 57 per cent. Since the introduction of the antitoxic serum in that month his death-rate has been reduced to 17·7 per cent. Professor Baginsky, of Berlin, was able to report a similar diminution in his mortality, which had fallen from 41 to 15·6 per cent. No evident evil effects had resulted from the injection of the serum in the experience of most of the speakers, and thus this reagent received from international testimony a most commendatory *imprimatur*, and its value must henceforth be appraised at a high standard.

The proceedings in the department of

SUGERY

were on the whole of a high order of merit, and became distinctly interesting when the President, Sir William MacCormac, was describing the effects of the new-fashioned conical bullets in gunshot injuries; and even more so when Murphy, of Chicago, came upon the scene and gave an admirable demonstration on the cadaver of his intestinal button and its method of application. The presidential address was of a somewhat exhaustive character, and well illustrated with lantern slides and by wet and dry specimens. The effects produced by the conical bullet are usually

of the most disastrous character, although the apertures of entry and exit may be comparatively small and insignificant. The current opinion that it causes less damage than the old round projectile hardly seems to be well founded. Certainly it was devised with no humane intention, and it seems admirably capable of throwing out of action, if not of killing, as many men as possible in the shortest possible time. Wounds involving only the soft tissues often heal with remarkable rapidity, and septic conditions are not necessarily induced by the passage of the bullet through the body. Cancellous bone can be penetrated without splintering, but compact tissue is much comminuted, whilst visceral lesions are always extremely severe. Fracture of the upper end of the femur was the first subject set down for discussion, and Sir William Stokes, who introduced it, almost took away the breath of his audience by claiming in the most matter-of-fact way that eleven different varieties of fracture of the neck of the femur should be enumerated, but how to distinguish between the several forms did not appear. Fortunately most, if not all, the speakers who followed were quite content with grouping them under two headings, the impacted and the unimpacted, and were willing to consider other modifications as interesting facts to be demonstrated in the museum, and not to be thought of at the bedside. Sir G. M. Humphry declared most emphatically that the non-union so much talked about, and unfortunately so often seen, was due not so much to the lack of blood supply, or to the defective general vitality of the patients, as to want of apposition of the fragments, and maintained that in any part of the body, if the fragments could be brought into close contact and kept at rest, union of a fracture was certain to occur. Mr. Bryant fully agreed as to this, and stated that, of forty-two consecutive cases of this nature treated by him in Guy's Hospital, the average age of the patients amounting to seventy years, all left the hospital with useful limbs, and scarcely any of them had suffered from bedsores. He, as well as other surgeons, thought that there should be no attempt at forcibly breaking up the fracture, which was generally

of an impacted nature, so as to restore the limb to the same length as that on the opposite side, except in the case of young and vigorous adults, and in such it should always be attempted. On Thursday there was perhaps less of general interest in the work of the section. Mr. Howard Marsh pointed out and illustrated the well-known fact that ankylosis can occur without suppuration. Mr. Buckston Browne showed how, in patients with enlarged prostates projecting into bladder, calculi could find a resting place beside the intravesical projection, and thus elude the search of the surgeon, even when armed with the sound or the cystoscope. This was followed by a consideration of the treatment of cysts and tumors of the thyroid body, Mr. Butlin leading the way in a most carefully thought out and clearly expressed speech, in which he recommended the enucleation of the growths rather than the extirpation of half the gland. He admitted, however, that the scar which resulted was a great objection to this proceeding, and stated that he had in a few cases returned to the plan introduced years ago by Sir Morell Mackenzie of injecting the cysts after emptying them, and had obtained thereby some excellent results. Dr. Keen of Philadelphia related that he had lately had the opportunity of seeing several operations performed for this condition on the Continent, and had been struck with several points in the technique of the proceedings which seemed to him of considerable importance. Thus Kocher and others rarely use an anesthetic, and find that by this means the bleeding is immensely diminished, since there is no engorgement of the head; the patient is also able to engage in conversation, and thus demonstrate the integrity of the recurrent laryngeal nerve. He also liked the transverse incision used by Kocher, and thought the scar would in this way be rendered less obvious, as also by the adoption of Halstead's subcuticular stitch. Several surgeons spoke against the method of injection, and Mr. C. Symonds urged the difficulty of always recognizing the presence of a cyst, and said the scar resulting from the open operation is so slight, especially if the incision is made in the median line, where it can easily

be hidden by a necklace and locket, that one is not justified in exposing the patient to the risks of treatment by injection. The chief interest on Friday centred around the demonstration given by Murphy of Chicago as to the method of intestinal anastomosis by means of his button. Several very interesting points were indicated, and subsequently a number of cases related in which this method has been employed with varying degrees of success. One very discordant voice was raised during the morning, viz., that of Mr. Harrison Cripps, who strongly inveighed against the button, and ventured a prophecy that in a few years nothing more would be heard of it, basing his opinion on the fact that quite recently he had seen two or three fatal cases in which death had resulted, not from a failure in producing the anastomosis, but from the effects of the button after a successful anastomosis had been accomplished, owing to the apparatus sloughing through the intestinal wall. He prefers to depend upon his fingers rather than on any mechanical contrivance, although Mayo Robson's bobbins is among the least objectionable of these, and strongly recommended the adoption of Maunsell's operation. Prof. Macewen thinks well of the button, but himself prefers to employ some method of simple suture—at any rate, until more certain facts are known as to the value or not of the contrivance.

IN THE SECTION OF OBSTETRICS AND GYNECOLOGY

Sir William Priestly, the president, in his introductory address mainly dealt with the activity displayed in recent years in gynecological practice, pointing out how such opportunities could be abused, and warning his hearers against overdoing the operative side of their work. He also thought that a clear distinction should be drawn between the obstetric physician and the operating gynecologist, being quite confident that there is quite sufficient opportunity in either department for any man to exercise his talents, but that none should wish to be both physician and surgeon. The first subject that was under discussion was the all-important one of the best means of preventing puerperal fever in private practice. It was introduced

in an excellent paper by Dr. Herman, who, taking it as granted that all such conditions were due to the activity of septic organisms, and also admitting that complete sterilization of the vagina is impossible, maintained that the chief precautionary measures consisted in rendering the external genital organs as pure as possible by the use of antiseptics, which must also be used for purifying the hands of attendants and nurses, whilst instruments should be boiled, and clean absorbent materials employed instead of napkins and sponges. As to the maternal passages, he recommends that as few vaginal examinations should be made as possible, that antiseptic lubricants and douches should be used, but thinks that in cases of normal labor healthy women do just as well without the douches as with them. Nurses, moreover, require more thorough training for private than for hospital work, because so much has necessarily to be left to their judgment, and they are not under the same discipline and control, whilst patients also are often extremely obstinate. The general trend of the discussion which followed was that antiseptic measures should be adopted in dealing with the external parts, but that the vagina itself should be dealt with aseptically, and no douches employed for normal cases unless the patient is especially desirous of it. The external genitals should be washed with a sublimate solution (1 in 2,000), the hands purified in 1 in 1,000 lotion, whilst instruments should either be boiled or immersed in a 1 in 20 carbolic solution. Dr. More Madden followed by recounting some of the more serious results which are found to follow untreated gonorrhoea, and urged that much greater care is needed in the treatment, especially of the early stages of this disease. Then the question of surgical treatment of puerperal fever was introduced by Dr. Murphy of Sunderland, who recommended the use of the curette, especially for sapraemic cases, the uterus being subsequently douched out and tamponaded with iodoform gauze. Of fourteen patients treated in this way, ten recovered. In localized peritonitis with a sero-plastic effusion, laparotomy was advised and the removal by lavage of the exudation; of such, four out of six cases

recovered. One or two speakers protested against such interference, and Dr. Lusk went so far as to call curetting "a most mischievous procedure"; but as a rule, operative measures in septic cases were considered advisable. On Thursday Dr. Martin of Berlin discussed Anterior Colpotomy, the term given to an operation for opening up the anterior vaginal fornix so as to reach the front of the uterus and also the appendages. He was able to report 109 cases performed for medium-sized fibroids, retroflexion, small ovarian cysts, chronic salpingitis, and tubal gestation, with not a single fatality. He also strenuously appealed for a more conservative treatment of the tubes which in chronic inflammations or hæmatosalpinx may be opened up, washed out, and closed again. Most of the gynecologists present agreed as to the value of this operation, which is easily performed, gives good access to the pelvic viscera, and also enables the intestines to be readily seen so that adhesions can be safely dealt with. The uterus is finally anteflexed and fixed to the anterior wall of the vagina by the sutures used for closing the wound. Subsequently Dr. Swayne of Bristol inaugurated a discussion on Eclampsia, in which a large number of divergent opinions were expressed as to the most suitable treatment, from which we gather that no two cases must necessarily be treated in the same way, but that all must be dealt with on their own merits. The early diagnosis of malignant disease of the uterus, and the question whether partial or complete excision should be undertaken, was the chief subject chosen for Friday's meeting. It was introduced by Mr. Knowsley Thornton, who maintained that careful clinical investigation should enable the doctor to make an early diagnosis without the need of removing a portion of the growth for microscopic examination—a proceeding which he considered distinctly dangerous in that it opened up lymphatic channels and veins, and might thus lead to secondary infection. He appealed to general practitioners to attend most carefully to any slight discharges or losses of blood, and subsequent speakers again emphasized the importance that must always be attached to such losses, especially after

the climacteric. Mr. Thornton advises supravaginal amputation of the cervix for adenoma and epithelioma, but owing to the great frequency of recurrence considers that total extirpation of the uterus is unadvisable. Dr. Martin, on the other hand, thinks that cancers of the womb should be treated on the same lines as scirrhus mamma—i. e., the whole organ should be removed at as early a date as possible. Prof. Pozzi of Paris condemns supravaginal amputation, especially before the menopause, as useless, recommending total extirpation in the early cases; and in the latter curetting and the application of the actual cautery. Certainly to an unbiased mind the latter suggestion seems most in accordance with the principles which guide us in the treatment of malignant disease elsewhere.

Perhaps the most important item in the work of the

SECTION OF PUBLIC MEDICINE

was the introductory address of the President, Mr. Ernest Hart, who dealt with the need for further legislation in order to ensure the appointment of medical officers to the various County Councils, so that their work may be rendered more effective. He then passed on to the importance of increased attention to our water-supplies, in view of his belief that cholera, typhoid, and many other diseases are waterborne. Finally, he commented on the absolute necessity of a reconstruction of the medical services in India, where the authorities seem quite satisfied to allow cholera to rage as an endemic affection, and take but slight precautions to ensure a pure water-supply. Moreover, the present medical staff is quite overworked, and military surgeons are tied down in a most hopeless way by regulations which, whilst enforcing all sorts of futile arrangements should an outbreak of cholera occur, take not the slightest regard as to purifying the water by boiling or filtering. Very wisely, the Section passed a resolution calling the attention of the Secretary of State for India to these facts, and demanding the appointment of a Royal Commission to consider them. Many other subjects of interest—such as the meat supply, sewer ventilation, the question of hospital isola-

tion, and the disinfection of patients—were discussed by the Section, and Dr. G. V. Poore gave an account of some most interesting experiments which he had made on the effects of treating urine in various ways, which went to prove that, when mixed with absorbent material and exposed to the air, it never became offensive, and might lead to the formation of a solid residuum of considerable value as a manure.

A very useful discussion took place on the opening day, in the

SECTION OF PSYCHOLOGY,

on the treatment of Melancholia, being introduced by Dr. Rayner in a well thought out and clearly expressed paper. He suggested that no routine method was possible in dealing with these cases, but that the general condition of the patient must be most carefully considered. In some, where the nutrition was failing, rest and even over-feeding should be recommended; whereas in other cases exercise in the open air, not carried, however, to the point of fatigue, together with suitable companionship, was desirable. Other speakers quite endorsed these opinions; but it was suggested that a sea voyage should not be advised too generally, as the patients were not always able to stand it, and as so many opportunities for suicide offered themselves under these conditions. The value of Hypnotics was also a good deal discussed, and on the whole one gleaned that the less they were employed the better.

A large range of subjects passed under the notice of the

SECTION OF PATHOLOGY,

few of which, however, call for notice here. Dr. Patrick Manson gave an excellent demonstration of the life history of the malaria parasite, which he maintains passes through the body of the mosquito, and there develops flagella which later on break off and constitute the spores which, on their admission to the body of the human subject, suffice to light up the disease. The possibility of its becoming encysted, as do many of the sporozoa, was suggested as the explanation of the recurrent attacks of malaria which frequently occur at a considerable period after the original attack.

Mr. Targett showed an admirable series of lantern slides indicating the character of the articular lesions found in syringomyelia; they are essentially similar to those met with in Charcot's joint affection. A discussion followed on the *Ætiology of Cancer*, opened by Dr. Braithwaite, in behalf of the microbic theory. His conclusions were vigorously attacked by Mr. Shattock and others, who maintained that the supposed histological appearances were in no way evidence of any such supposition. The most valuable item of the later proceedings consisted in a debate as to the nature and nomenclature of lymphadenoma and allied diseases. The general idea which prevailed was that lymphadenoma (or, as Mr. Spencer, who opened the subject, preferred to call it, lymphoma) is due to some specific organism not yet identified, and that it must be placed midway between tubercle and malignant disease. In some instances its manifestations were entirely local, being limited to one gland or to a single group of glands, whilst in the more severe cases it was disseminated throughout the lymphatic tissue of the body, constituting then the condition known as Hodgkin's disease, an affection which might or might not be associated with leukaemia. Lymphosarcoma, on the other hand, is a disease quite apart from those mentioned above, and consists in a true primary sarcomatous development within the gland.

The topics of discussion in the

SECTION OF OPHTHALMOLOGY

were not of general interest. The first formal discussion brought out the fact that there are a series of cases of recurrent inflammation of the deeper parts of the conjunctiva which are rather general than local in origin, and need careful attention to the general health as well as local treatment. But the most valuable work was the debate on the treatment of chronic glaucoma, as to which a certain amount of difference of opinion was expressed. The most competent authorities, however, almost unanimously agreed as to the desirability of performing a large iridectomy far back as soon as the symptoms had manifested themselves with certainty. There was also a general consensus of opinion as

to the value of a cystoid cicatrix, although it was thought that this is not easy to obtain. Prof. McHardy recommends the removal of all pads at the end of a few hours after the operation, and the use of a special nurse to support the eye during any efforts which involve straining, stating that such practice in his hands has been most satisfactory. All agreed, too, as to the need of attending most closely to the general health, so as to prevent constipation, undue fatigue, etc.

The department devoted to

DISEASES OF CHILDREN

was well attended throughout, there being on the first two days an average attendance of at least seventy members. The first portion of Wednesday morning was devoted to a consideration of Syphilitic Manifestations in Bones and Joints; but although several well-known authorities took part in the discussion, nothing very special was added to our knowledge of the matter. A considerable degree of interest was attached to the next subject brought forward—viz., the Radical Cure of Hernia. Mr. Rushton Parker opened with an excellent paper, in which he mentioned that he had performed the operation on forty male children, with two deaths; but in spite of this unusually high mortality he considered that it was a distinctly desirable proceeding. Like Prof. Macewen, who spoke subsequently, he had commenced by being strongly opposed to surgical interference in the case of children, but as time had passed he has been more favorably impressed with it, especially in hospital and dispensary practice, where it is almost impracticable to get the children properly attended to if a truss is ordered. The tissues of children are quite sufficiently firm to stand the manipulation, and if care is taken the constituents of the spermatic cord run but little risk of damage. The recuperative power in children, moreover, is so great that the wounds heal most admirably, and on the whole the prognosis is better in children than in adults, although it is generally agreed that six weeks' recumbency is essential in order to allow of consolidation of the parts. The operations chiefly commended were those described by Mitchell Banks and

Macewen; but even if the latter is undertaken, the inguinal canal should never be opened up. Mr. Waterhouse made a useful suggestion as to the dressing, all that is needed, in his opinion, being the application of a little celloidin collodion, in which celloidin takes the place of the gun-cotton employed in its production. This is quite impervious to urine, and thus the wound is securely sealed up. Naturally there were a few dissentient voices in the discussion, amongst the most marked being those of Messrs. Langton and Macready, who, as one might expect from their position as surgeons to the Truss Society, maintain that any case of hernia in a child can be readily cured by the application of a suitable truss. On Thursday the chief matter under consideration was the Nervous Sequelæ of Acute Infectious Diseases in Children, and all the speakers were agreed as to the rarity of such conditions, most of them having seen but three or four cases each. The type of lesion varied, those most commonly observed being acute poliomyelitis, paralysis of the ocular muscles, thrombosis of the cerebral veins, or even paralysis of peripheral nerves, such as the ulnar or popliteal. Dr. Barlow considered them more frequent after measles than after other fevers, and gave an instance in which a young policeman was attacked after measles with a transverse spinal myelitis, which terminated fatally and revealed *post mortem* a large number of punctiform hemorrhages in the dorsal cord, which he compared to the eruption on the skin. Von Ranke had also seen a case of paralysis after pneumonia in a boy, and agreed with the general opinion that such phenomena were probably due to the action on the nerve centres of the specific toxins of the microbes. Amongst the separate papers which were read may be mentioned one by Comby, who related three cases which were clinically indistinguishable from diphtheria, but in the exudation of which no bacilli were discovered. He gave a good prognosis, and this was fully justified by the result. He urged in consequence the need for a bacteriological examination of the false membrane in all suspected cases, and the guidance of the prognosis by the results thus obtained. Telford-Smith,

of the Lancaster Asylum, related the after-history of two cases of Craniectomy for microcephalic idiocy, and agreed with the idea now generally held that any good arising from the operation is due as much to the careful after-training always instituted as to the operation itself. The value of trephining in tubercular meningitis also received attention through a paper by Dr. Cautley, who thinks that but little good can arise from such treatment. Although Mr. D'Arcy Power has not yet saved a child by this means, he has, in six or seven instances, seen a temporary improvement, and thinks that the operation is distinctly justifiable. Mr. Waterhouse referred to his well-known successful case, which still remains well, but anticipates that only in a few instances can recovery be expected, as general tuberculosis so often co-exists. A single tapping is absolutely useless, continual drainage for ten or fourteen days being essential, and this is possibly best secured through the occipital bone by lifting up the cerebellum.

The work of the

SECTION OF OTOTOLOGY

was, on the whole, of too specialized character to be of much interest to the general practitioner. The most important points raised were twofold. Firstly, it was generally agreed that pilocarpine can do but little good for nerve deafness, except perhaps in a few early cases to assist in the absorption of any exudation which may be present; and secondly, Professor Macewen read a most suggestive paper on "The Intracranial Complications of Chronic Otorrhœa," in which he dealt with a few points of difficult diagnosis, and then urged upon his hearers the need of maintaining the most absolute asepsis in examining or operating upon the ear or its adnexa. Thus in tubercular cases, to which he especially alluded, the entrance of sepsis changes the aspect of the condition at once, the septic element becoming the "predominant partner." Moreover, by a most apt quotation from "Richard II.," he emphasized the need of care in operating, for fear that "a pinprick" may admit sepsis to the meninges, "and—farewell, king!"

As to the department of

PHARMACOLOGY AND THERAPEUTICS,

Antitoxin was again to the front on the first day, the usual *couleur-de-rose* reports being indulged in by all the speakers, with perhaps one or two exceptions. Tetanus was in this discussion alluded to, as well as diphtheria, but the more recent work in connection with erysipelas, cellulitis, and the treatment of malignant growths was scarcely referred to. A most valuable paper on "The Antitoxin of Snake Poison" was contributed by Professor Fraser, of which probably a good deal more will be heard. On the second day the requirements of the profession, in view of the approaching revision of the Pharmacopœia, were under consideration, and a good many useful suggestions were made, several of which, we understand, have already been conceded by the Pharmacopœia committee—e. g., the introduction of the metric system, which will stand side by side with the old measures in most places, but will be used alone for the standard testing solutions always described at the end of the work. Some of the suggestions which had reached the committee, according to the secretary, Dr. Tirard, were almost ludicrous. Thus one gentleman wished a bug-powder to be included amongst the official drugs, whilst another desired goose-grease to be introduced, and still a third thought that geological experts should be added to the committee to decide whether alum is derived from shale or clay!

THE SECTION OF LARYNGOLOGY

was particularly wise in not providing itself with too long a programme, and was thus able to get through everything set down in the syllabus. Moreover, it confined itself rather to formal debates than to the consideration of a series of haphazard papers. It commenced by a discussion on the etiology of nasal polypi, and although nothing much new was added to our knowledge of the subject, yet the views of Zuckerkandl, who contributed a short practical paper, were in the main accepted. Nasal polypi are by him looked on in much the same way as those which appear in the ear, and are considered to be inflammatory in

origin, the subjacent bone being often associated in the change. Woakes's necrotizing ethmoiditis was by almost all the speakers looked on with doubt, one expressing surprise that anyone took it seriously. On Thursday the chief subject for debate was as to the infectious nature of "Lacunar Tonsillitis" (as the disease is now termed which we formerly knew as "Follicular Tonsillitis.") The ideas as to the nature of this affection have considerably changed during the last few years, and scarcely anyone now doubts its septic origin. The main point as to its infectiousness was not clearly proved by any of the speakers, although all seemed prepared to accept it. The most interesting of the three formal discussions was, undoubtedly, that which took place on the third day, on the "Indications for Early Radical Treatment in Malignant Disease of the Larynx." This was introduced in a well-balanced and judicial paper by Dr. Bryson Delavan, of New York, who set forth clearly his views as to when the operation should be undertaken, and the requisites in order to ensure success. It must never be looked on as a simple proceeding, or as one devoid of risk, and its execution should be limited to those who can be so well assisted and who can command such experience and skill as shall ensure as far as is possible a successful issue. Mr. Butlin, who followed, entered somewhat more fully into the minutiae of the surgical technique, and remarked that, judging from the statements and writings of American and Continental *confrères*, the subject of laryngectomy is further advanced in this country than anywhere else. The general idea running through the animated debate which ensued was that the all-important essential was an early diagnosis, and this could only be the result of the general recognition of the principle that every case of persistent hoarseness must be examined by a skilled laryngologist as soon as possible. In cases of doubt, an exploratory thyrotomy is quite justifiable, and in this way it might be anticipated that the disease would be recognized before it had attacked the cartilages, and could then be dealt with by cutting or scraping the new growth away, without necessitating the removal of the larynx. In fact, the

hope was expressed that in the future laryngectomy would be looked on as the opprobrium of laryngologists.

As to individual papers read before the Section, the only one which requires notice here is that which was presented by Dr. Risien Russell, who by most careful experiments has been able to demonstrate the existence and position of the cortical centre presiding over abduction of the cords. Former experimenters—such as Semon, Horsley, Krause, and others—had never been successful in their search for this centre, owing to the preponderance of abduction always present. But Dr. Russell had been able to separate the abductor from the adductor fibres in the recurrent laryngeal nerve by splitting it longitudinally, and then after dividing the adductor fibres stimulation of the suitable cortical area with a weak current sufficed to produce typical abduction.

THE DERMATOLOGICAL SECTION

was largely occupied with the consideration of unusual cases and rare affections of the skin, of which a considerable number were shown. Two general and prearranged debates took place, one on "Pruritus," and the other on the "Influence of Diet in the Ætiology and Treatment of Diseases of the Skin." From the former there was but little new to be gathered, the general impression given the discussion being that pruritus is almost incomprehensible in its origin, and exceedingly intractable in its treatment. As to the question of diet, a most masterly and lucid paper was read by Dr. Walter G. Smith of Dublin, and he, together with several other speakers, agreed that too much stress is often laid on the question of diet in the treatment of such diseases as psoriasis and eczema, and that it is often unwise to torture patients by too much limitation in this direction. Of course in such conditions as urticaria the question of diet is all-important.

Necessarily the work of the

SECTIONS OF PHYSIOLOGY AND ANATOMY

was of too technical a character to be of much general interest. The discussion, however, in the former Section as to the use of sugar as a food is worthy of a brief notice, in that it involves ques-

tions of considerable importance as to the diet of those who have to undertake heavy muscular exercise. Prof. Stokvis of Amsterdam attempted to prove that the conclusions drawn by Dr. Vaughan Harley on this subject are erroneous, and that sugar, if it is a food at all, can only be looked upon as a bad food, much inferior to proteids as a work-producing substance. It was also suggested that Dr. Harley's experiments, carried out on himself, introduced considerable elements of possible error, and Dr. Pembrey emphasized the point that a psychological factor might be present, in that the experimenter came to his work with a strong bias in favor of the point which he desired to prove. On the whole the question must still be considered *sub judice*, although, as Prof. Halliburton showed, the common consent of athletes cannot be entirely overlooked, and by them proteids are unanimously chosen for training on rather than carbohydrates.

In conclusion, the present meeting of the Association can scarcely be looked on as one of epoch-making importance. Doubtless it has brought home to practitioners the fact that in the serum of suitably immunized animals we have an agent of considerable potency which is capable of dealing efficiently with certain diseases of bacterial origin; but in all probability the present somewhat cumbersome method of producing and utilizing it will be considerably improved upon, and later on simplified. The other important feature was rather suggested than demonstrated—viz., the influence of internal secretions on the metabolism of the body. We may confidently anticipate that the following up of this line of research will lead us to the discovery of the cause of sundry diseases, the ætiology of which is at present very obscure, and may place in our hands remedies as useful and beneficial as thyroid extract is in cases of myxœdema. Beyond these salient features but little stands out as really noteworthy. Much has been mere reiteration of facts already well known, and we trust that the attempt to sift the material, and place before our readers the conclusions arrived at in a concise and definite form, will not have been without interest.

PERISCOPE.

IN CHARGE OF WM. E. PARKE, A.M., M.D.

MEDICINE.

Diseases Which May Stimulate Pleurisy.

An American contemporary recently delivered an excellent sermon on the diagnosis of pleurisy, the text being the following quotation from a lecture of Trousseau; "I admit that in the great majority of cases pleurisy is a very easy disease to diagnose; however, there occurs cases in which, while all signs of pleurisy are present, yet the autopsy shows some other affection to be the cause of death." The writer groups the diseases which may simulate pleurisy with effusion, thus: 1. Diseases of the pleura. Excepting hydatid cysts, these are rare, the only one mentioned being a case published by Ouliment, in which cartilaginous degeneration of the pleura gave rise to dulness, bronchophony, and absence of vibrations in such a way as to make the diagnosis of pleurisy clear, and it was only at the autopsy that the true condition was discovered. 2. Diseases of the lungs. Under this group are included pneumonia with bronchial obstruction (in which the temperature often forms the only guide), "spleno pneumonia" (a disease which we hear of for the first time, and which is, according to Graucher, a pulmonary congestion whose symptoms resemble those of pleurisy), hydatids of the lung and pulmonary carcinoma. 3. Diseases of the mediastinum, among which it is stated that both cysts and aortic aneurism have been mistaken for pleurisy. 4. Diseases of the liver, especially hydatid cyst when they encroach on the thoracic cavity. Error of diagnosis here can only be avoided by carefully tracing the limits of dullness. Hepatic carcinoma has also given rise to a false diagnosis. 5. Diseases of the kidney, mention being made of one case of perinephritic abscess which closely simulated pleurisy.—*Med. Times*.

A Constant Sign of Commencing Meningitis.

This consists in the inharmonious movements of the chest and diaphragm. It exists from the beginning, and may serve to reveal it even in insidious cases. It requires careful searching. The chest and abdomen must be bared, but not suddenly, or the hyperesthetic skin will take on accidental movements from the action of the air.

In the first period of meningitis we see irregularity of rhythm and then remark the inequality of the amplitude or development of the chest. Another sign is the irregular type of respiration and dissonation of the movements of chest and diaphragm. The respiration is effected by the lower respiratory muscles of the chest. Looking at the umbilical region, instead of the normal elevation with each inspiration, there is either immobility or depression. These movements are not connected with the Cheyne-Stokes type of respiration.—*Times and Register*.

Strychnine Delirium.

Those members of the medical profession who have employed caffeine very largely in the treatment of cardiac and renal disease have recognized that large doses of this drug, continuously administered for a considerable period, developed in certain individuals what has been properly called "caffeine craziness." In other words, the full medicinal doses required by the condition of the heart or kidneys have also been sufficiently large not only to produce an increased activity of the brain, such as is seen when coffee is taken in large amounts, but also have gone farther than this, and by the very cerebral stimulation produced temporary insanity. Within the last few years the medical profession has been employing in certain States what may be considered as massive doses of strychnine in the treatment of failing respiration or circulation, and has obtained therefrom very good results. It having been found that these full doses of strychnine acted favorably, when given in an emergency, we have been tempted to continue their administration where the symptoms were relieved but temporarily, and, as a result, have oftentimes been pleased with their effect. On the other hand, a sufficient number of cases have been seen in which cerebral disturbance has followed these large doses to put us continually on the lookout for such untoward symptoms. As a rule, he who administers large doses of strychnine in an emergency is on the *qui vivé* for some twitching of the muscles of the forearm or other portion of the body as an evidence of the physiological action of the drug. While we believe that these symptoms are commonly produced by a single administration of the remedy, we are also confident that its continued administration in full doses frequently fails to produce these evidences of heightened reflex activity, and in their place causes a more or less active delirium, in which the patient frequently refuses to take his medicine, or develops the delusion that his attendants are conspiring to poison him or do him some other injury.—*Therapeutic Gazette*.

Excursion Rates to Atlanta.

On account of the Atlanta Exposition, the B. & O. R. R. Co. will sell excursion tickets at greatly reduced rates. Season tickets will be sold every day until December 15th, good returning until January 7, 1896. Twenty-day tickets will be sold every day until December 15th, good returning for twenty days from date of sale. Ten-day tickets will be sold Tuesday and Thursday each week until December 24th, good returning for ten days from date of sale. The rates from Philadelphia will be \$33.25 for season, \$25.25 for twenty-day, and \$20.00 for ten-day tickets.

Correspondingly low rates from other points on the line.